

Snake Basin Hatchery Information System Adult Trapping and Spawning/Events Program User's Manual

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1. Introduction to the trapping module

What data should be entered into the trapping module?

- Trapping module should be used to enter all the **initial dispositions** of trapped fish **prior to and including ponding**:
 - e.g., released prior to being ponded, ponded, trap mort, transferred out prior to being ponded.
- Spawning/Events module should be used to enter any **changes in fish dispositions** of ponded fish **after ponding**.
 - e.g., transferred out after being ponded, pond mort, spawned, released after being ponded

The screenshot shows the 'Test Agency Trap Entry' window for 'Test Hatchery - Test Trap - Chinook - Centimeters - 1/28/2010'. The interface includes a menu bar (FILE, DATA, GRID, CONFIGURE, VIEW, MODE, EDIT) and a main data entry area. Numbered callouts identify the following fields:

- 1: Injuries (I)
- 2: Sex (MALE, FEMALE, UNKNOWN)
- 3: Tags (CWT, OTHER TAGS, PIT)
- 4: Lengths (Fork Length, AC, Back Space)
- 5: Dispositions (RELEASED DOWNSTREAM, TRAP MORT, RELEASED BELOW, GIVEN AWAY, POND 1, KILLED, POND 2, TRANSFERRED OUT, RELEASE SITE, SPAWNED KILLED)
- 6: Count (1)
- 7: Injuries (I)
- 8: Samples, Injection, Comment (INJECTED, SAMPLES, COMMENT)
- 9: Recapture (RECAPTURE)
- 10: PIT TAG READER (OFF)
- 11: Alternate species selection (Blue Catfish)

At the bottom, there is a table with columns: TrapDate, Marktype, Natural, Sex, 'Mini Jack', Jack, LengthType, Length, and L. The table contains three rows of data:

TrapDate	Marktype	Natural	Sex	'Mini Jack'	Jack	LengthType	Length	L
1/19/2010	LOP	<input checked="" type="checkbox"/>	M	<input type="checkbox"/>	<input type="checkbox"/>	UN	0	UI
1/19/2010	UNM	<input checked="" type="checkbox"/>	M	<input type="checkbox"/>	<input type="checkbox"/>	UN	0	UI
12/31/2009	AD	<input type="checkbox"/>	U	<input type="checkbox"/>	<input type="checkbox"/>	UN	0	UI

Below the table are buttons for TODAY, ALL, EDIT DATA, and DELETE RECORD.

Location of attributes

1. Marks
2. Sex
3. Tags
4. Lengths and Jack/Mini-Jack designation
5. Dispositions
6. Number of fish
7. Injuries
8. Samples, Injection, Comment
9. Recapture
10. PIT reader On/Off
11. Alternate species selection

Select/clearing attributes

- (1) Selected attributes are highlighted in GREEN
- Single attributes can be cleared by clicking the button again (will change back to original color)

Nothing selected

Idaho Department of Fish and Game Trap Entry - Clearwater Fish Hatchery

FILE DATA GRID CONFIGURE VIEW MODE EDIT

AD (A) MALE (M) FEMALE (F) UNKNOWN (U)

RV (R) CWT (C) OTHER TAGS (T) PIT (P)

LV (X) INJECTED SAMPLES (S) COMMENT

Male selected

Idaho Department of Fish and Game Trap Entry - Clearwater Fish Hatchery

FILE DATA GRID CONFIGURE VIEW MODE EDIT

AD (A) MALE (M) FEMALE (F) UNKNOWN (U)

RV (R) CWT (C) OTHER TAGS (T) PIT (P)

LV (X) INJECTED SAMPLES (S) COMMENT

- (2) All selected attributes can be cleared by clicking CLEAR button.

7 8 9 Back Space

0 JACK (J) MINI (K) JACK

NEW RECORD RECAPTURE CLEAR

POND 1 FOOD BANK

POND 2 TRANSFERRED OUT

RELEASE SITE KILLED

Trapping data grid

- (3) Each record is added to the data grid with all selected attributes
- Can use the scroll bar to look at all attributes
- (4) Can choose to see all trapped data for the primary species or only for fish trapped on today's date (ALL data is selected in example below).

3	TrapDate	Marktype	Natural	Sex	'Mini Jack'	Jack	LengthType	Length	Length
	5/15/2009	UNM	<input checked="" type="checkbox"/>	U	<input type="checkbox"/>	<input checked="" type="checkbox"/>	FL	40	UN
	5/14/2009	AD ULOP	<input type="checkbox"/>	M	<input type="checkbox"/>	<input type="checkbox"/>	FL	65	UN
	5/14/2009	UNM	<input checked="" type="checkbox"/>	F	<input type="checkbox"/>	<input type="checkbox"/>	FL	65	UN
	5/14/2009	AD	<input type="checkbox"/>	M	<input type="checkbox"/>	<input type="checkbox"/>	FL	65	UN
	5/14/2009	UNM	<input checked="" type="checkbox"/>	U	<input type="checkbox"/>	<input type="checkbox"/>	FL	65	UN

TODAY ALL 4 EDIT DATA DELETE RECORD

- (1) Records are added in order of the Record ID attribute.
 - Record IDs are automatically generated: start at 1 with the first record added and increase incrementally with each record; start over at 1 on the next trapping date.

Species	RecordID	Count
Chinook	1	

Adding/deleting/editing a record

- (2) When all desired attributes are selected, click NEW RECORD to add record to database
- Record will appear in the data grid with all selected attributes represented in the data field columns; it will be the record on the top

0

JACK (J)
MINI (K)
JACK

POND 2

RELEASE SITE

FOOD BANK

2 NEW RECORD RECAPTURE CLEAR

- Delete a record: (3) select the record by clicking on a row at the left side (circled area below), which will highlight the entire row in ORANGE. Hit the delete key on keyboard or (4) click DELETE RECORD button below the grid.

	TrapDate	Marktype	Natural	Sex	'Mini Jack'	Jack	LengthType	Length	Length
3	5/15/2009	UNM	<input checked="" type="checkbox"/>	U	<input type="checkbox"/>	<input checked="" type="checkbox"/>	FL	40	UN
	5/14/2009	AD,ULOP	<input type="checkbox"/>	M	<input type="checkbox"/>	<input type="checkbox"/>	FL	65	UN
	5/14/2009	UNM	<input checked="" type="checkbox"/>	F	<input type="checkbox"/>	<input type="checkbox"/>	FL	65	UN
	5/14/2009	AD	<input type="checkbox"/>	M	<input type="checkbox"/>	<input type="checkbox"/>	FL	65	UN
	5/14/2009	UNM	<input checked="" type="checkbox"/>	U	<input type="checkbox"/>	<input type="checkbox"/>	FL	65	UN
TODAY		ALL		EDIT DATA			4	DELETE RECORD	

- Editing a record: Select the record in the grid, (1) click on the EDIT DATA button. This will show all the attributes for this record highlighted in GREEN. Make the desired changes by clicking the relevant buttons and (2) click ACCEPT CHANGES. The edited record will overwrite the original record and appear in the grid.

Idaho Department of Fish and Game Trap Entry - Clearwater Fish Hatchery - Crooked River Satellite Fish Hatchery Trap - Chinook - Centimeters...

FILE DATA GRID CONFIGURE VIEW MODE EDIT

AD (A)

RV (R)

LV (X)

Other (O)

NONE (N)

INJURIES (I)

MALE (M)

CWT (C)

INJECTED

PIT TAG READER (OFF)

FEMALE (F)

OTHER TAGS (T)

SAMPLES (S)

Cutthroat Trout

Green Sunfish

Count 1

UNKNOWN (U)

PIT (P)

COMMENT

Length (cm):

Fork Length 40

1

2

3

4

5

6

7

8

9

0

AC

Back Space

☒ JACK (J)

☐ MINI (K) JACK

RELEASED ABOVE

RELEASED BELOW

POND 1

POND 2

RELEASE SITE

TRAP MORT

GIVEN TO NPT

GIVEN TO SHO-BAN

TRANSFERRED IN

FOOD BANK

2

ACCEPT CHANGES

RECAPTURE

CLEAR

TODAY

ALL

1

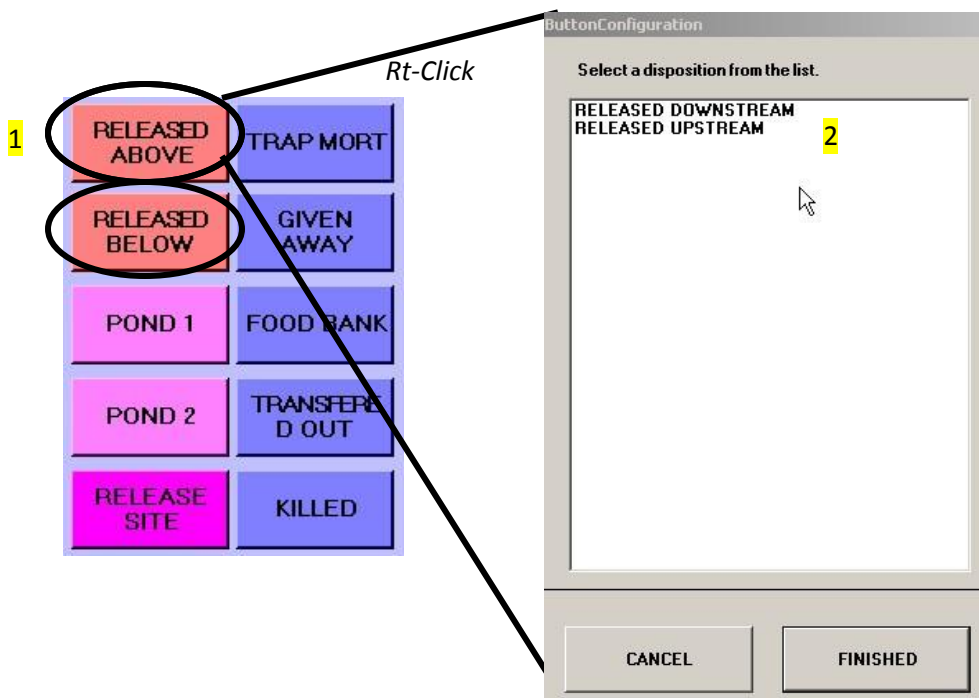
EDIT DATA

DELETE RECORD

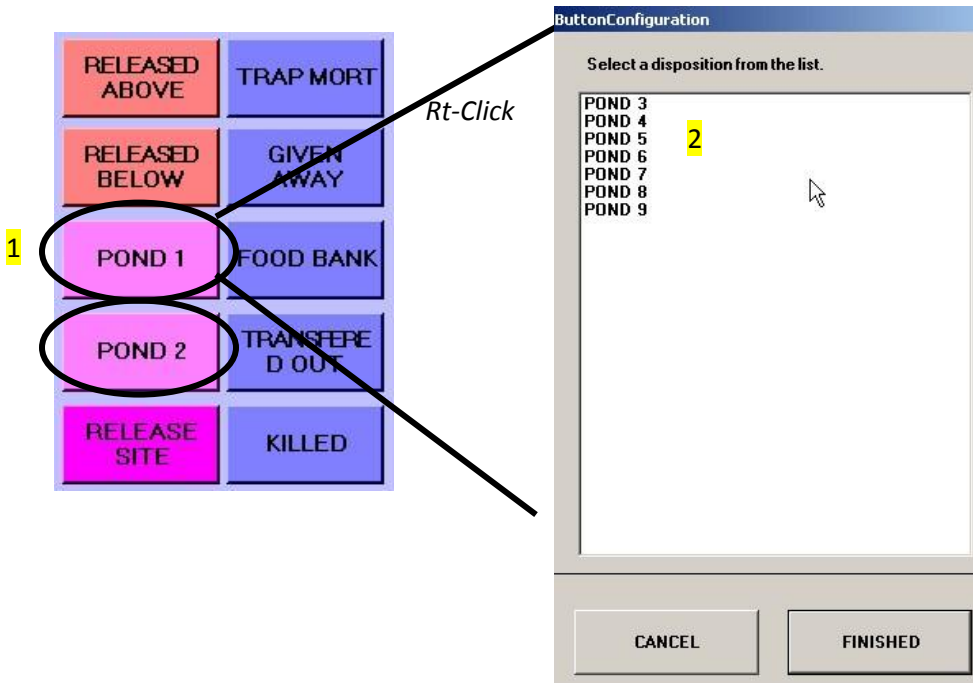
2. Configuring data entry – trapping module

Changing disposition buttons

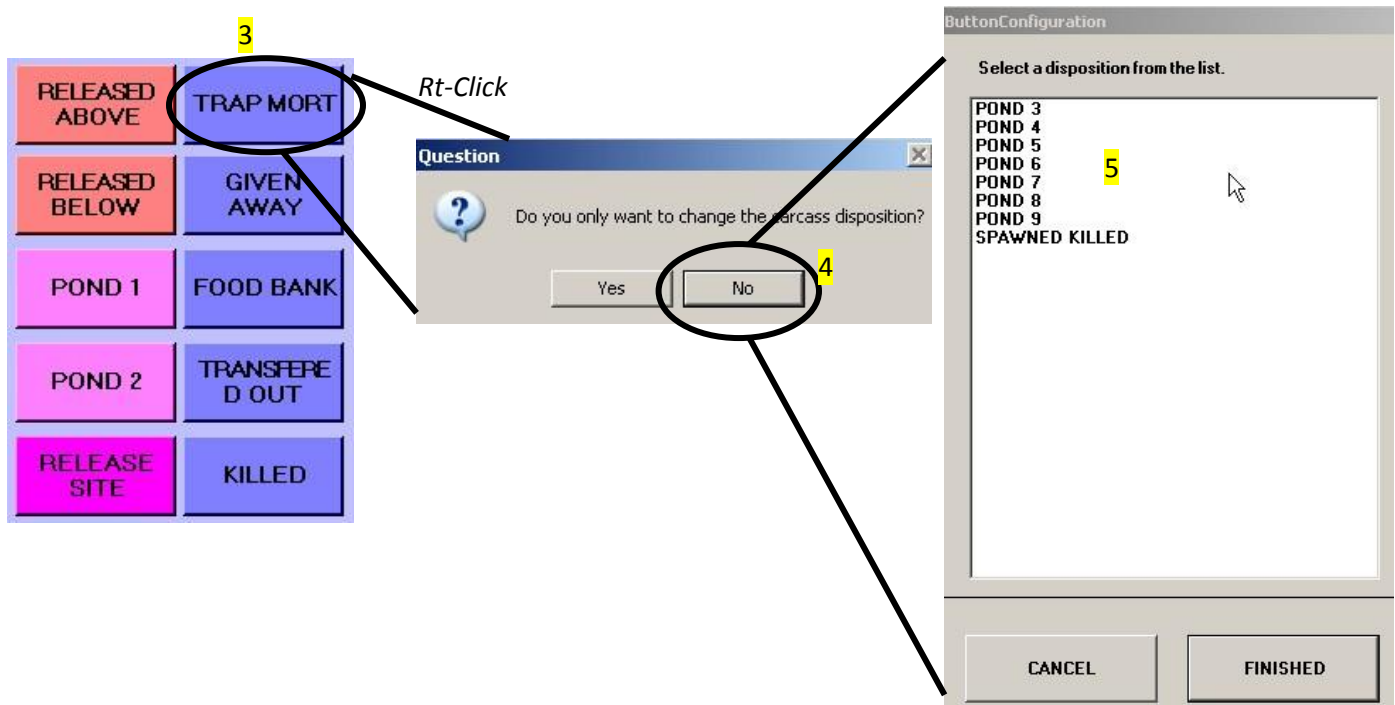
- The disposition buttons available when entering trapped fish can be selected from various master lists. These buttons represent the *initial dispositions of trapped fish*. Only those initial dispositions that result in the death of a fish (TRAP MORT, KILLED, SPAWNED-KILLED) will allow the selection of a *carcass disposition*, i.e., what happens to a *dead* fish's carcass. All other initial dispositions are for *live* fish (releases, ponds, GIVEN AWAY, TRANSFERRED OUT).
 - Released Above, Below, Upstream and Downstream: (1) Right click on one of the release buttons to see the list of all available release types. (2) Select the desired release for that button and click FINISHED. The new release type now will be available on the button. There are no carcass dispositions associated with these initial dispositions.



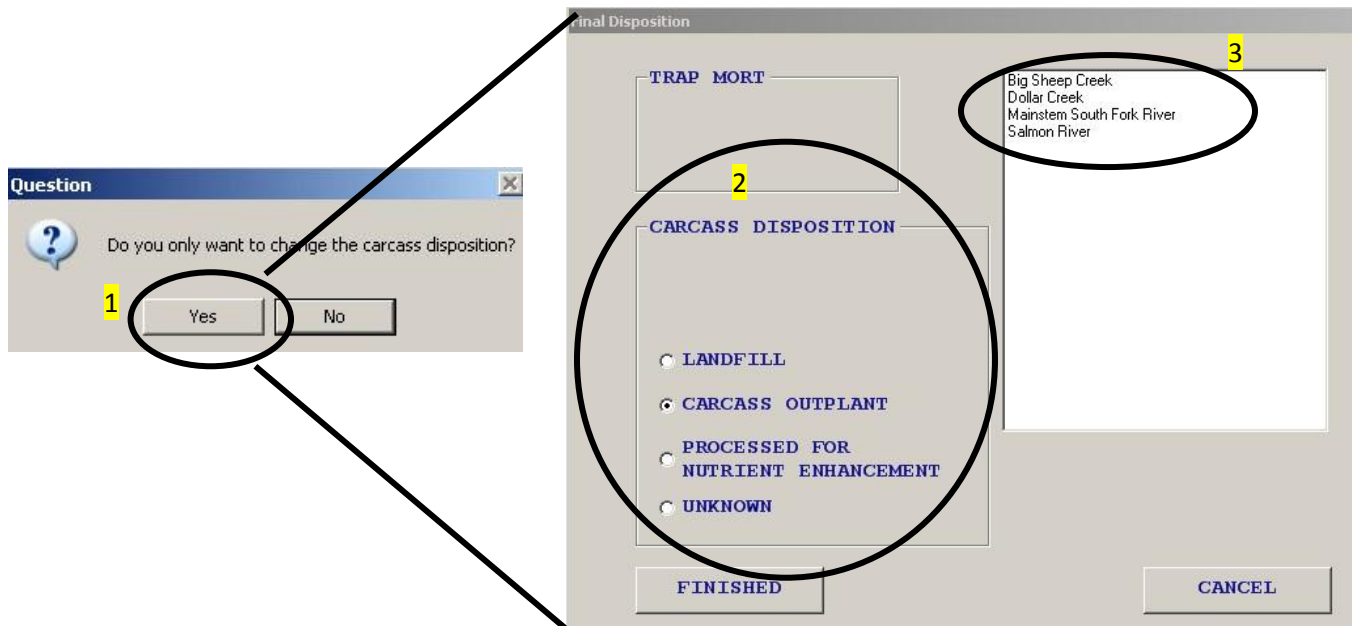
- Ponds: (1) Right click on one of the pond buttons to see list of all available ponds. (2) Select the desired pond and click FINISHED. The new pond will now be available on the button. There are no carcass dispositions associated with these initial dispositions.



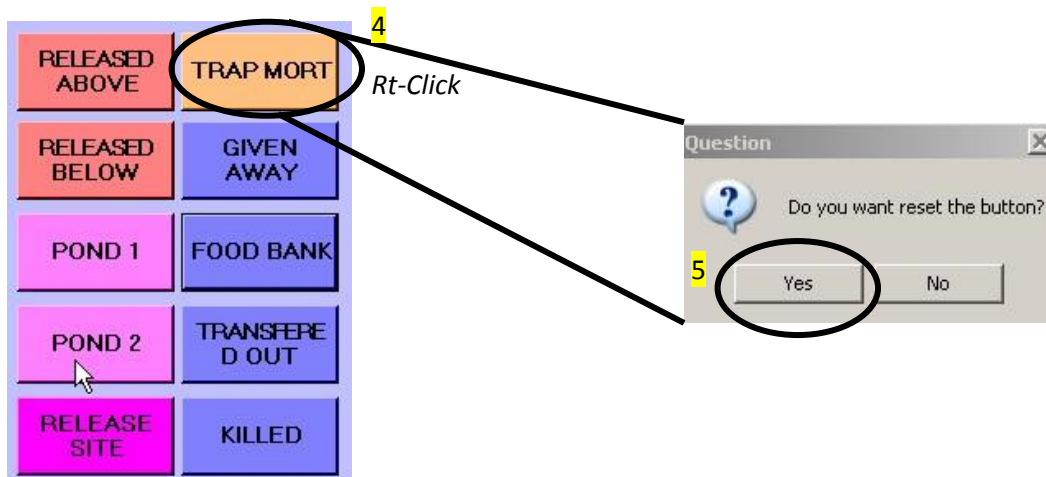
- TRAP MORT: (3) Right click on TRAP MORT. The user will then have the option to either change the initial disposition on the button or select the carcass disposition associated with trap morts.
 - (4) Click NO and the list of available initial disposition buttons will be shown. (5) Select the desired disposition and click FINISHED. The new disposition will now be available on the button.



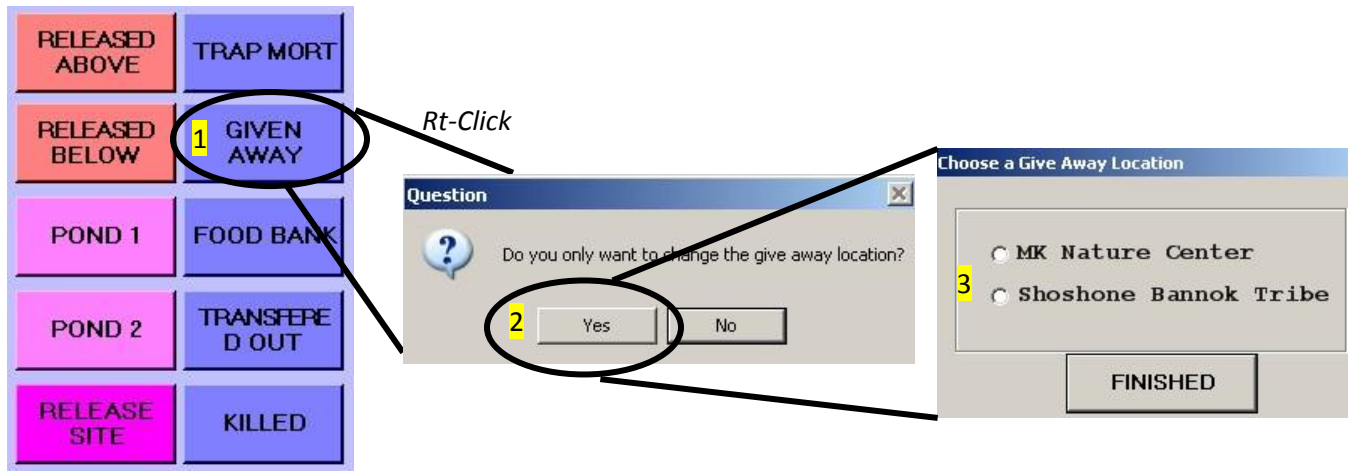
- (1) Click YES to change the carcass disposition for trap morts. (2) A list of available carcass dispositions will be shown. Select the desired carcass disposition and click FINISHED. Each trap mort entered will have this carcass disposition listed in the carcass disposition field of the record. Selection of a carcass disposition is required to enter the record.
 - LANDFILL, PROCESSED FOR NUTRIENT ENHANCEMENT, AND UNKNOWN carcass dispositions do not have the option to enter a location.
 - (3) CARCASS OUTPLANT allows a release location to be selected. The list of available release locations is setup in the CONFIGURE-RELEASE SITES menu option (see [Release Sites](#) section).



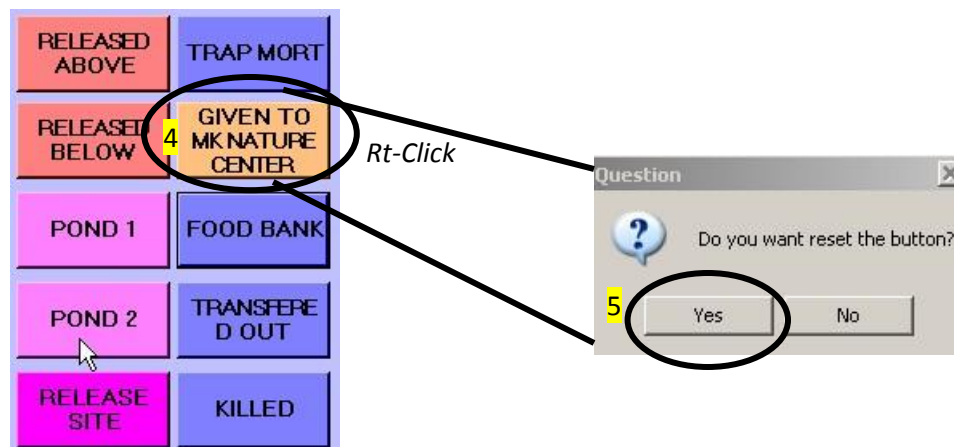
- (4) After the carcass disposition is configured, the TRAP MORT button will turn orange.
- The configured carcass disposition can be removed by right clicking on the orange button and (5) clicking YES to reset the button.



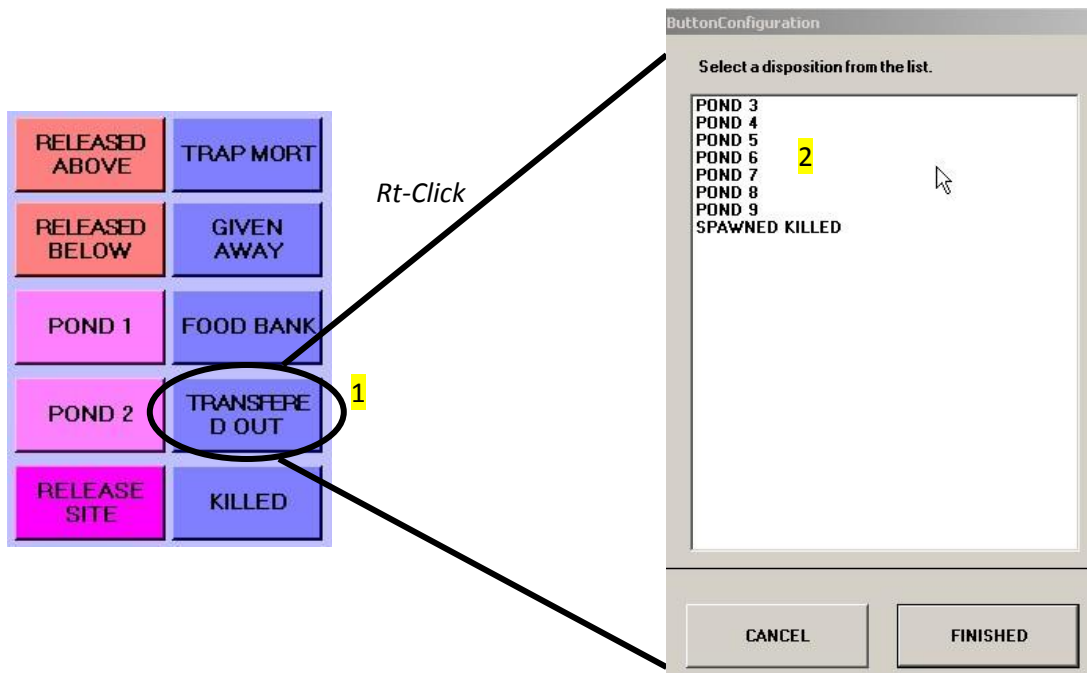
- GIVEN AWAY: (1) Right click on GIVEN AWAY. The user will then have the option to either change the initial disposition on the button or select the give-away location (i.e., agency) associated with the initial disposition given away.
 - IMPORTANT NOTE: This initial disposition is for *live* fish only. Use the KILLED or SPAWNED-KILLED initial disposition with a carcass disposition of GIVEN AWAY for fish that are killed prior to ponding and then given away. Fish that are initially ponded and then given away must be listed as ponded here in the trapping module and then given away in the [Events Module](#).
 - Click NO and the list of available initial disposition buttons will be shown and can be selected, similar to that described in the [Changing disposition buttons-trap mort](#) section above.
 - (2) Click YES to change the give-away location for live fish given away. (3) A list of available agencies will be shown. Select the desired agency and click FINISHED. Each fish entered with the GIVEN AWAY initial disposition will have this agency listed in the release site field of the record. The list of available give-away agencies is setup in the CONFIGURE-GIVE AWAY AGENCIES menu option (see [Give away agencies](#) section below).



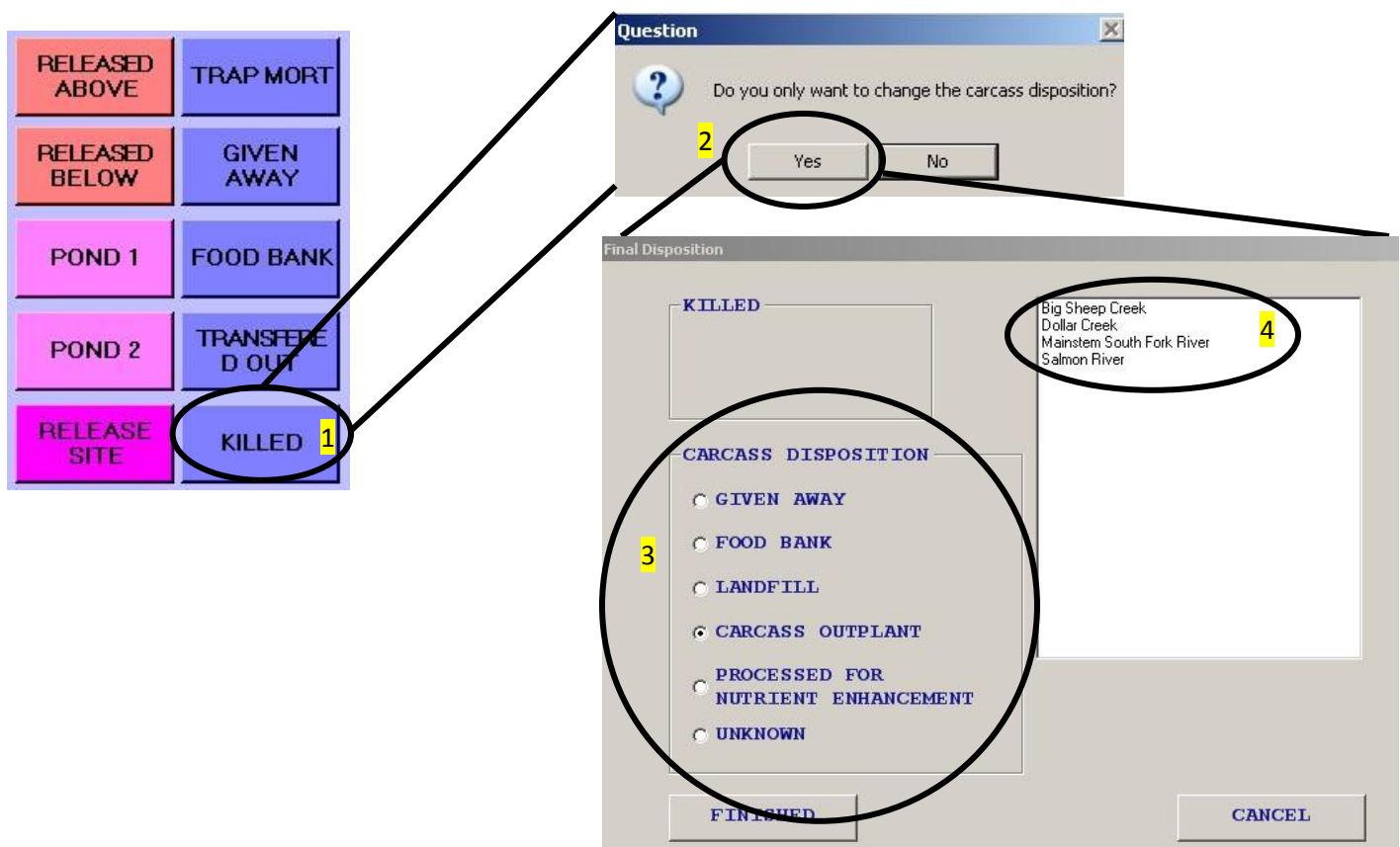
- (4) When the give-away agency is configured, the GIVE AWAY button will turn orange and be listed with the relevant agency.
- The configured give-away agency can be removed by right clicking on the orange button and (5) clicking YES to reset the button.



- Transferred out: This button also can be changed. (1) Right click on the TRANSFERRED OUT button to see list of all available initial dispositions. (2) Select the desired disposition and click FINISHED. The new disposition will now be available on the button.



- KILLED: (1) Right click on KILLED. The user will then have the option to either change the initial disposition on the button or select the carcass disposition associated with the initial disposition killed.
 - Click NO and the list of available initial disposition buttons will be shown and can be selected, similar to that described in the [Changing disposition buttons-trap mort](#) above.
 - (2) Click YES to change the carcass disposition for killed fish. (3) A list of available carcass dispositions will be shown. Select the desired carcass disposition and click FINISHED. Each killed fish entered will have this carcass disposition listed in the carcass disposition field of the record. Selection of a carcass disposition is required to enter the record.
 - LANDFILL, PROCESSED FOR NUTRIENT ENHANCEMENT, AND UNKNOWN carcass dispositions do not have the option to enter a location.
 - (4) CARCASS OUTPLANT allows a release location to be selected. The list of available release locations is setup in the CONFIGURE-RELEASE SITES menu option (see [Release Sites](#) section below).
 - (4) GIVEN AWAY allows a give-away agency to be selected. The list of available agencies is setup in the CONFIGURE-GIVE AWAY AGENCIES menu option (see [Give Away Agencies](#) section below).
 - (4) FOOD BANK allows a food bank location to be selected. The list of available food banks is setup in the CONFIGURE-FOOD BANKS menu option (see [Food Banks](#) section below).



- When the carcass disposition is configured, the KILLED button will turn orange.
- The configured carcass disposition can be removed by right clicking on the orange button and clicking YES to reset the button (see [Changing disposition buttons-Trap Mort](#) section for details on resetting configurations).

- SPAWNED-KILLED: One of the buttons first must be configured to show the initial disposition of spawned-killed (see the [Changing disposition buttons-Trap Mort](#) section for details on changing a button's initial disposition). The carcass disposition can then be configured by right clicking the SPAWNED-KILLED button.
 - IMPORTANT NOTE: This initial disposition is only for fish spawned directly from the trap, without first being ponded. Fish that are initially ponded and then spawned-killed must be listed as ponded here in the trapping module and then spawned-killed in the [Events Module](#).
 - Click YES to change the carcass disposition for spawned-killed fish. A list of available carcass dispositions will be shown, which is the same as the list for KILLED fish. Select the desired carcass disposition and click FINISHED. Each spawned-killed fish entered will have this carcass disposition listed in the carcass disposition field of the record. Selection of a carcass disposition is required to enter the record. See [Changing disposition buttons-KILLED](#) section for details of available carcass dispositions.
 - When the carcass disposition is configured, the SPAWNED-KILLED button will turn orange.
 - The configured carcass disposition can be removed by right clicking on the orange button and clicking YES to reset the button (see [Changing disposition buttons-Trap Mort](#) section for details on resetting configurations).

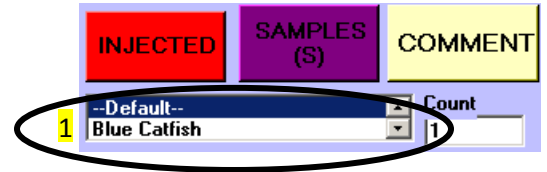
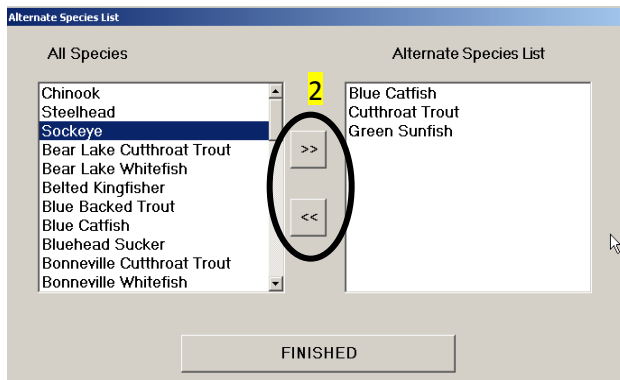
Species/Site/Date

- The user will be prompted to enter these data before using the trapping program. Records entered using the trapping program will be associated with this information until the user changes it using the menu commands.
- To use the menu to change this information, go to CONFIGURE-SPECIES/SITE/DATE.
 - Select (1) agency, (2) hatchery, (3) trap, (4) target species and (5) trap date

- (4) The target species list defaults to the standard list (Chinook, Steelhead, Sockeye). If a different species is desired, click on the SHOW ALL button to see all available species and select a species.
- IMPORTANT NOTE: (5) The TRAP DATE entered here will be associated with all fish entered in the trapping module. If the user is entering data from hardcopy data sheets from multiple trapping dates, the TRAP DATE must be changed prior to entering fish trapped on a different date.
- If it is the first time the user is entering data for the selected species and site, the user will be prompted to enter length criteria after clicking FINISHED (see [Length Criteria](#) section below).

Alternate Species

- (1) The alternate species available to be selected from the list in the trapping program can be changed using the CONFIGURE-ALTERNATE SPECIES menu item
 - (2) Use the arrows to move species between the ALL SPECIES list and the ALTERNATE SPECIES list



Length Criteria

- The length criterion specifies the length ranges for Jacks, Mini Jacks, 1-Ocean and 2-Ocean fish. These criteria will be applied only to the current species and trap site. These lengths will be used to automatically populate the Jack and Mini Jack fields.
 - (3) The MIN and MAX are the range of lengths that are accepted by the program. This is to prevent typos in the database. (4) The MINI JACK field indicates the maximum length that will be designated a mini jack.
 - (5) All lengths that are less than those entered in the 1-Ocean Male field but greater than the Mini Jack field will be designated a jack. Lengths that are less than those entered in the 1-Ocean Female field will be designated a 1-Ocean Female. (6) All lengths that are less than those entered in the 2-Ocean Males and Females fields but greater than the 1-Ocean field will be designated a 2-Ocean fish. Lengths that are larger than those entered in the 2-ocean field will be designated a 3-Ocean fish.

Length Criteria - Centimeters

Species: Chinook
Trap Site: Johnson Creek Weir

MIN: 0 MAX: 200 (3)

MINI JACK: 40 (4)

Female Male

1-Ocean: 64 64 (5)

2-Ocean: 80 80 (6)

Note: Any fish less than the one ocean male is considered a jack and any fish greater than the 2-ocean cut off length is considered a 3-ocean fish.

FINISHED

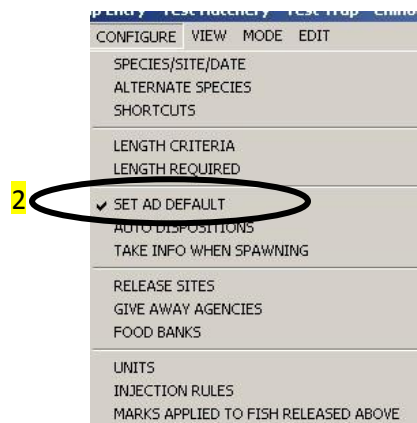
Length Required

- (1) Select the CONFIGURE-LENGTH REQUIRED if the user wants a length to be required for all records added (a check mark will be seen beside the menu item when selected).
 - With this selected, if user tries to enter a NEW RECORD and a length has not been entered, a pop-up will indicate a length is required.
 - If the menu item is not selected, the user will be able to check the JACK or MINI JACK boxes without entering a length.
 - If a record is entered with more than one fish (i.e., for a group of fish), the length requirement will be ignored.



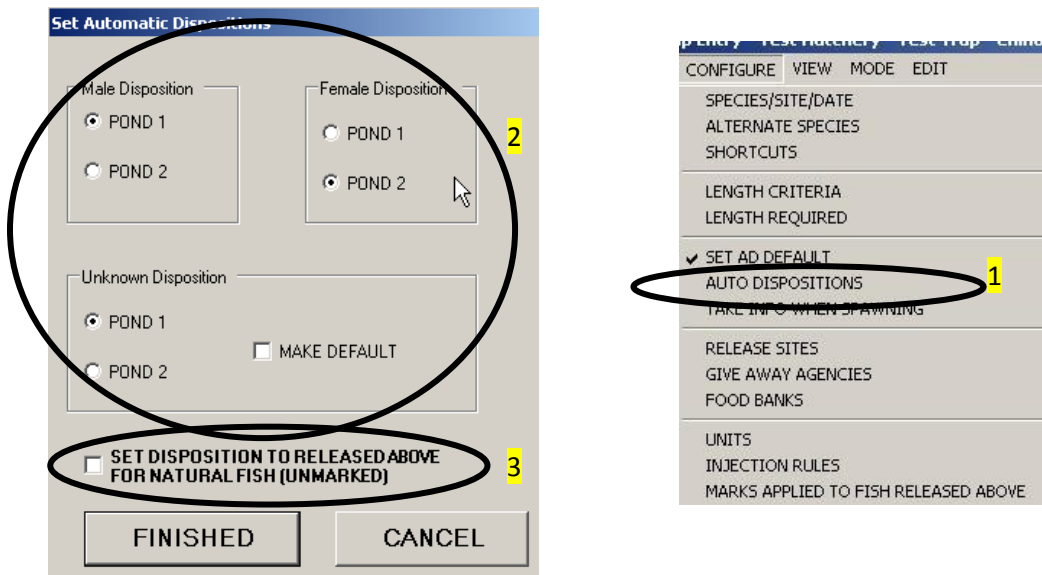
Set AD default

- (2) The user can set AD clip as the default for all fish (a check mark will be seen beside the menu item when selected). This is useful if only a few unmarked or other marked fish are anticipated. The AD button can be manually unselected when a record of a fish with different marks must be added.



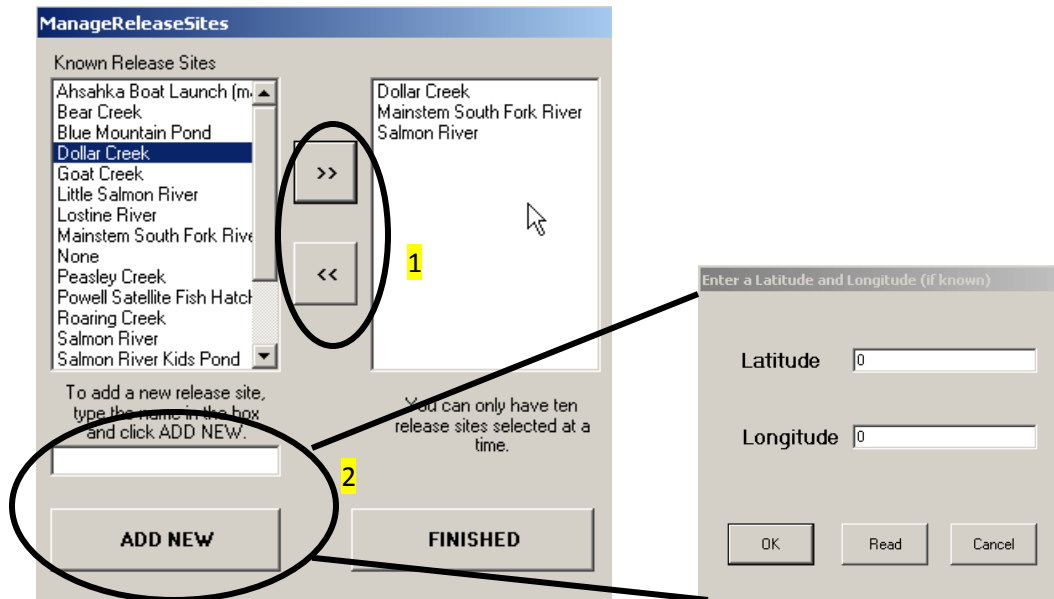
Auto Disposition

- The user can have the program automatically assign a pond to fish based on sex and/or assign “released above” for all “natural” fish (unmarked, no CWT). (1) A check mark will be seen beside the menu item when enabled.
 - Go to CONFIGURE-AUTO DISPOSITIONS menu, which will bring up the (2) pop-up where the user selects the pond for each sex. If sex is not being determined at time of trapping, the user can select the pond for unknown dispositions and make this pond the default. This will cause all fish to go to one pond at trapping and the Events module can be used to move fish to specific ponds when sex is determined (see section 6. Creating events).
 - (3) The check box for all “natural” fish to be designated as “released above” can also be checked.
 - All of these setting can be manually overridden by clicking a different disposition for a given record.



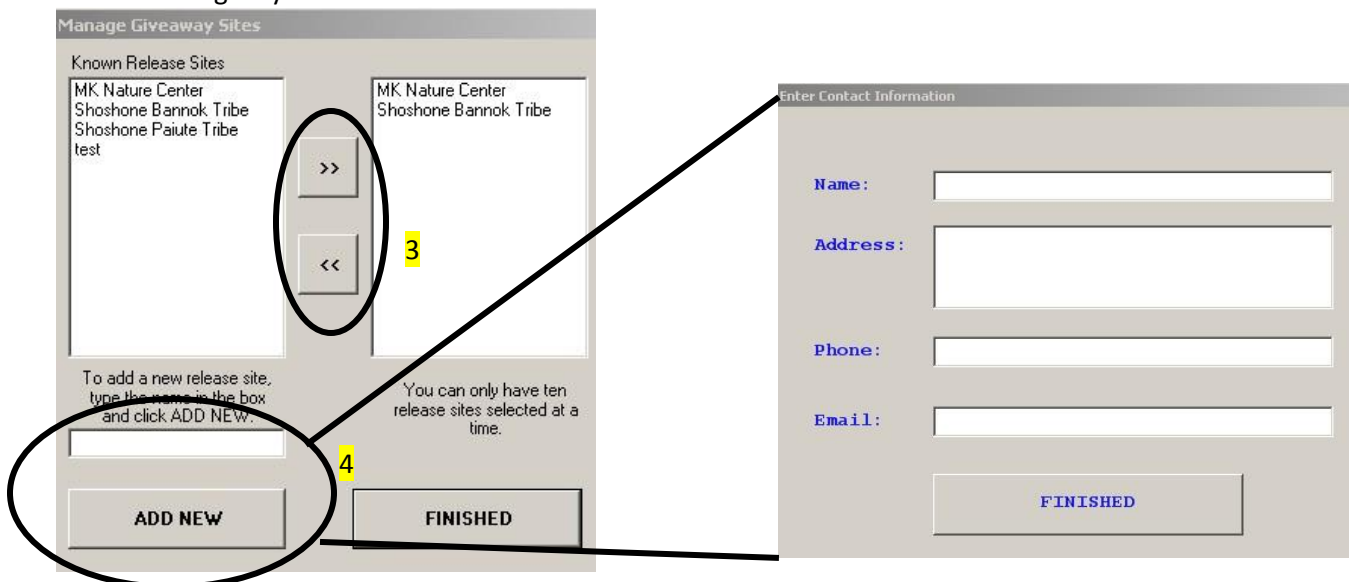
Release sites

- The user can change the release sites available for the RELEASE SITE disposition button (released other) and for the carcass disposition CARCASS OUTPLANT.
 - Go to CONFIGURE-RELEASE SITES menu item. (1) Select sites to be visible in the program by using the arrows to move locations from “known release sites” to the list on right.
 - (2) New site locations can be added to the “known release sites” by typing in a new site in the text box and clicking ADD NEW. A popup window will prompt the user for latitude and longitude of the release site. Lat/Long should be entered in decimal degrees using the WGS84 datum.



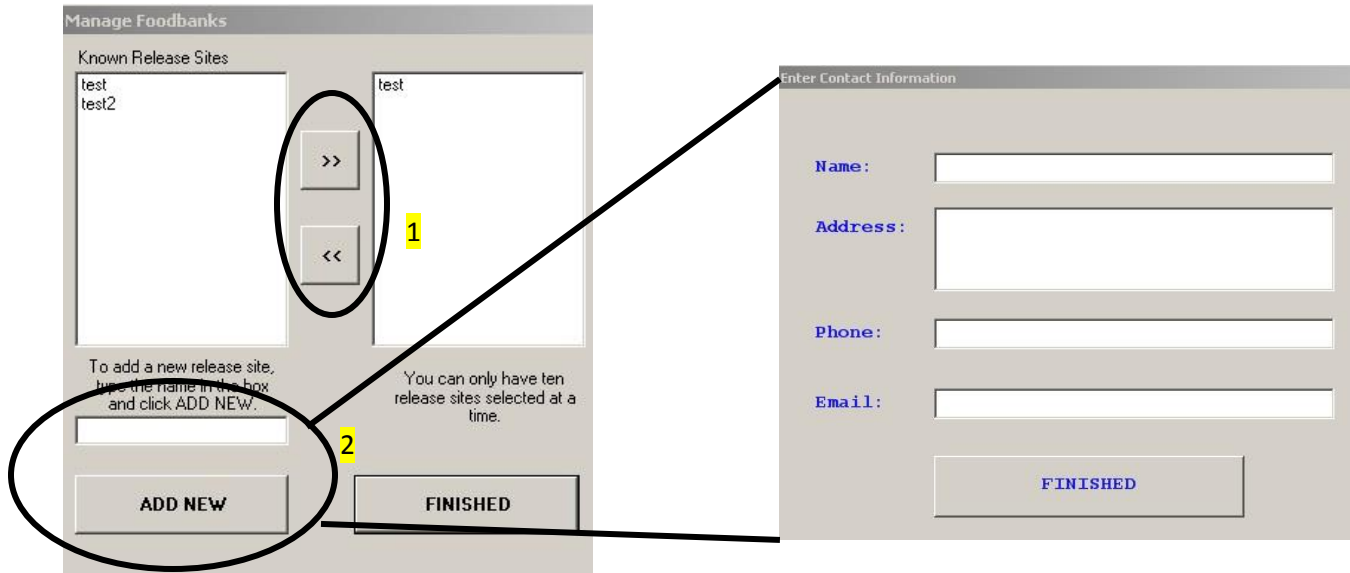
Give away agencies

- The user can change the give-away agencies available for the GIVEN AWAY disposition button.
 - Go to CONFIGURE-GIVE AWAY AGENCIES menu item. (3) Select sites to be visible in the program by using the arrows to move locations from “known give-away sites” to the list on right.
 - (4) New agencies can be added to the “known give-away sites” by typing in a new site in the text box and clicking ADD NEW. A popup window will prompt the user for the contact information of the agency.



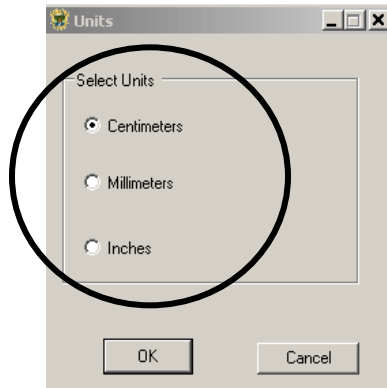
Food banks

- The user can change the food banks available for the carcass disposition FOOD BANK.
 - Go to CONFIGURE-FOOD BANKS menu item. (1) Select sites to be visible in the program by using the arrows to move locations from “known food banks” to the list on right.
 - (2) New food banks can be added to the “known food banks” by typing in a new site in the text box and clicking ADD NEW. A popup window will prompt the user for the contact information of the food bank.



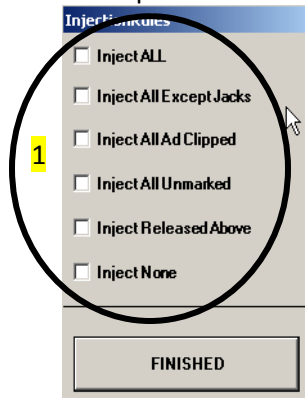
Units

- Units for length measurements for an individual record can be set as cm, mm or in. The user can select the unit type for input and when the record is added, the program will convert them to cm (the default) in the record. The current units will be shown at the top of the trapping program window.



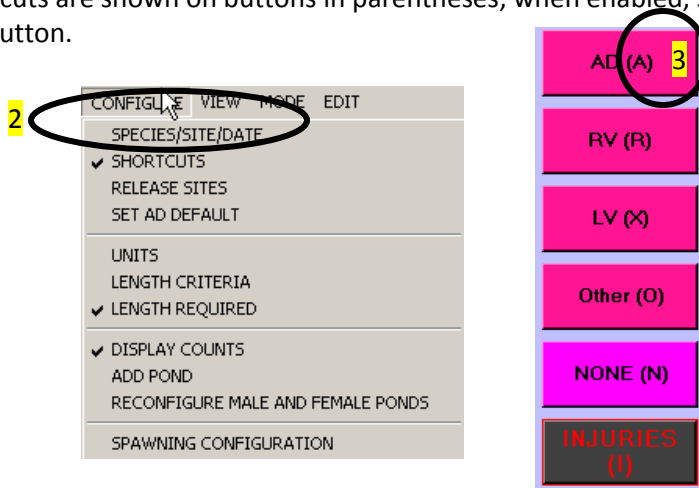
Injections rules

- (1) Injections can be automatically selected for a fish, based on the other fish attributes selected (e.g., AD clipped, Jacks, etc.). The rule can be manually overridden if needed; a popup will remind the user that an injection rule is in place and ask if the user really wants to manually override the rule.



Shortcuts

- (2) Keyboard shortcuts can be enabled by checking the CONFIGURE-SHORTCUTS menu item. (3) The shortcuts are shown on buttons in parentheses; when enabled, simply type the key in parentheses to enable the button.



3. Entering trapping data

Marks

- AD, RV, LV and NONE marks require a simple click to select. A mark can be changed before the record is entered by selecting another mark (previously selected mark will be unselected).
- OTHER marks is used for either an existing mark when the fish is trapped or an applied mark before release.
 - (1) Check the relevant mark. (2) If an existing mark, leave the EXISTING mark checked. If applied mark, uncheck the EXISTING box. (3) Indicate number of marks. (4) Click ADD; mark abbreviation will appear in text box. (5) Click FINISHED to add attribute to the current fish. When record is added to database, all marks indicated will appear in the Marks column.
 - Multiple marks can be added to one fish. Select desired attributes and click ADD as many times as necessary to get all relevant marks. (6) Each time ADD is clicked, the mark is appended to the list of marks to be associated with the current fish, which is shown in the text box. When FINISHED is clicked, the entire list will be associated with the current fish.

The image shows a software interface for entering trapping data. On the left, a vertical list of buttons for selecting marks: AD (A), RV (R), LV (X), Other (O), and NONE (N). The 'Other (O)' button is highlighted with a black oval. A line connects this button to a larger 'Other Marks' dialog box on the right. The dialog box has a title bar 'Other Marks' and a list of checkboxes for various marks. The 'LOWER LEFT OPERCULE PUNCHED' checkbox is checked and circled with a yellow '1'. To its right is a spinner box set to '1', circled with a yellow '3'. Further right is an 'EXISTING' checkbox, which is also checked and circled with a yellow '2'. Below the list of checkboxes are two buttons: 'ADD' (circled with a yellow '4') and 'CLEAR'. At the bottom of the dialog are 'FINISHED' (circled with a yellow '5'), 'RESET', and 'CANCEL' buttons. Below the main dialog, a separate box shows the 'ADD' button next to a text field containing 'LROP, CP' (circled with a yellow '6') and a 'CLEAR' button.

Sex

- Sex requires a simple click to select.

Tags

- CWT requires a simple click to select.
- OTHER TAGS gives the option of adding OPERCULE, FLOY, JAW, RADIO, STAPLE or VISUAL IMPLANT tags. (1) Check box to select tag type. (2) If an existing tag, check EXISTING box. If applied tag, leave EXISTING box unchecked. (3) Identification numbers can be added for each type.

TAGS

Tags

☐ OPERCULE TAG DIRECTION COLOR

NUMBER ☐ EXISTING

1 ☒ **FLOY TAG** **3** HQQQ ☒ **EXISTING** **2**

☐ JAW TAG ☐ EXISTING

☐ RADIO TAG ☐ EXISTING

☐ STAPLE TAG ☐ EXISTING

☐ VISUAL IMPLANT TAG WHICH EYE COLOR

NUMBER ☐ EXISTING

FINISHED CLEAR CANCEL



- PIT tag button gives the option to manually enter a PIT tag number. The default prefix is automatically entered. Click DONE when finished to add to current fish.



PITNumber

3D9.1BF

A	B	C	AC
D	E	F	
1	2	3	BACK SPACE
4	5	6	
7	8	9	DONE
0	.		

Lengths and Jack/Mini-jack designation

- Length is required for all fish if this is indicated in the configuration (see [Length required](#) in the [2. Configuring data entry](#) section). If not required, JACK or MINI JACK may be selected.
- (1) Fork Length (default length type) is entered in text box either by clicking numbers or using key board.
- Additional alternate lengths can be added. Click FORK LENGTH button. (2) Enter additional lengths next to length type. All length types will be recorded when record is added to the database (up to 3 length types).
- (3) Default length type can be changed by checking the MAKE DEFAULT box next to desired type. The FORK LENGTH button will then be changed to have the new length type.

The image shows two windows from a data entry application. The 'Length (cm)' window on the left has a title bar and a 'Fork Length' label. Below it is a numeric keypad with buttons 1-9, 0, and a decimal point. To the right of the keypad are buttons for 'AC', 'Back Space', and checkboxes for 'JACK (J)', 'MINI (K)', and 'JACK'. A yellow circle with the number '1' is around the 'Fork Length' label. The 'Alternate Lengths' window on the right has a title bar and a table with columns 'Length Type', 'Length', and 'Make Default'. The table contains four rows: 'Total Length', 'Mid Eye to Posterior Scale', 'Mid Eye to Hypural Plate', and 'Other'. A yellow circle with the number '2' is around the 'Length' column for 'Total Length', and a yellow circle with the number '3' is around the 'Make Default' checkbox for 'Total Length'. A 'FINISHED' button is at the bottom of the 'Alternate Lengths' window.

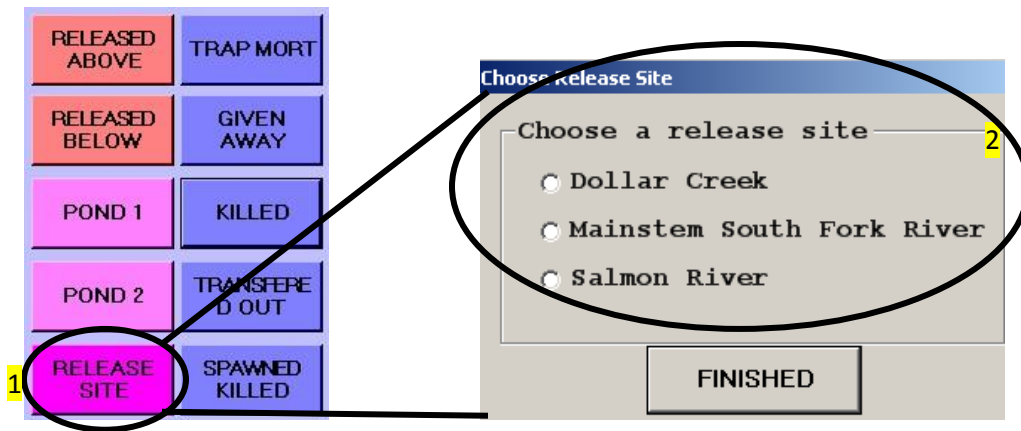
Length Type	Length	Make Default
Total Length		<input type="checkbox"/>
Mid Eye to Posterior Scale		<input type="checkbox"/>
Mid Eye to Hypural Plate		<input type="checkbox"/>
Other		<input type="checkbox"/>

- When entering a length that meets the Jack or Mini-Jack criteria, the JACK or MINI-JACK check box will automatically be checked and this designation will be entered in the record for this fish (see [2. Configuring data entry](#) section for how to set these criteria).
- (4) If no lengths are being recorded, but the fish is known to be a Jack or Mini-Jack, the JACK and MINI-JACK box can manually be checked.

The image shows the 'Length (cm)' window. The 'Total Length' label is above a text box containing the number '60'. Below the text box is a numeric keypad. To the right of the keypad are buttons for 'AC', 'Back Space', and checkboxes for 'JACK (J)', 'MINI (K)', and 'JACK'. A yellow circle with the number '4' is around the 'JACK (J)' checkbox, which is checked.

Dispositions

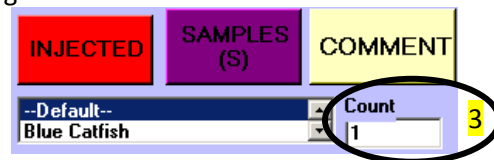
- All dispositions require a simple click to select.
- RELEASED ABOVE and RELEASED BELOW are for fish that are released immediately adjacent to the trap. (1)
- RELEASE SITE should be used for all other releases away from the trap.
 - (2) Specific Release Sites can be chosen by clicking on the RELEASE SITE button and checking the relevant button. Available release sites are set in the configuration (see [2. Configuring data entry](#) section).
 - Disposition will be listed as RELEASED OTHER in the record



- Note that the dispositions entered in the trapping interface should only be the *initial* dispositions. Any fish that are initially ponded and then have a different final disposition (e.g., transferred, pond mort, spawned) should be entered in the EVENTS interface (see [6. Creating Events](#) section).

Number of fish

- (3) The default value is “1” for ease of entering individual fish with detailed attribute information (length, mark, etc.). Groups of fish also can be entered as one record by changing the number of fish indicated in COUNT. Entering groups of fish is only recommended when detailed attribute information cannot be collected at trapping.



Injuries

- Injuries can be associated with each fish record by clicking the INJURIES button. Injuries can be selected by checking boxes on the list; multiple selections are allowed.

Samples

- Any samples collected can be associated with a specific fish by clicking the SAMPLES button
- (1) Select the sample type from the drop-down menu, (2) enter the unique sample identification in the NUMBER box, (3) click ADD A SAMPLE.
 - (4) The sample to be added to the record will appear in the list below. Multiple samples can be added to one record by repeating the same procedure above.

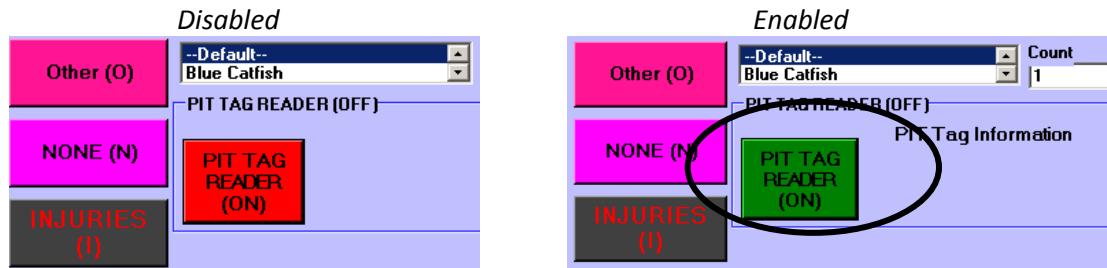
Recaptures

- A recaptured fish can be designated by clicking the RECAPTURE button (dark GREEN when enabled). When the record is added, there will be a "1" in the recapture field to designate a recaptured fish (all other non-recap fish will be designated with a "0").

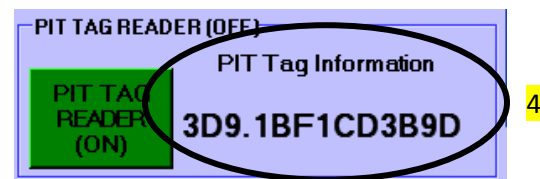


PIT Reader

- A PIT tag reader can be used to automatically associate PIT numbers with a fish record. Click PIT TAG READER to enable this function (GREEN when enabled).



- With the PIT reader connected to the computer using a serial port or USB and the PIT READER button enabled in the program, scan the fish with the PIT wand. (1) If a PIT tag is found by the wand, a popup menu will appear with the tag number (tag number can be edited in the text box if needed).
- (2) The user will be prompted to indicate which fish the tag is associated with, the CURRENT FISH or NEXT FISH.
 - If the CURRENT FISH button is selected, then the PIT number will be associated with the fish attributes for the record that is added immediately after the PIT popup is closed.
 - The NEXT FISH button will associate the PIT number with the 2nd record added after the popup is closed. The NEXT FISH selection is useful if scanning of fish occurs ahead of collecting the other fish attributes.
 - (3) The REJECT TAG button will ignore the tag information and the PIT number will not be associated with any records
- (4) The PIT number will appear next to the enabled PIT READER button for the fish that the data will be associated with. (5) When the record is added, the PIT number will be associated with that individual fish.



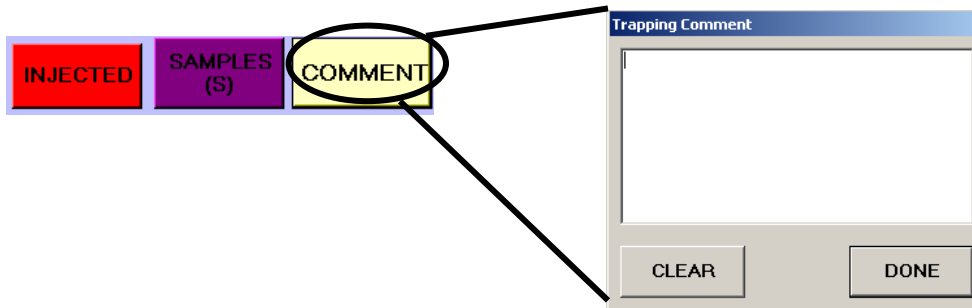
	TrapDate	Marktype	Sex	Jack	Length	Disp1	Recapture	PIT	Injected	RecordID
	6/11/2009	AD	M	<input type="checkbox"/>	66	POND 1	1	3D9.1BF1695...	<input type="checkbox"/>	4
	6/11/2009	AD_RV_LV	M	<input checked="" type="checkbox"/>	56	POND 2	0	3D9.1BF1CD3...	<input type="checkbox"/>	3

Injections

- Click INJECTED for fish that are getting injections.

Comments

- Additional comments may be added by clicking the COMMENTS button and entering text in the box (up to 254 characters).



4. Editing trapping data

Individual records

- An individual record can be edited in the program (see [Adding/deleting/editing a record](#) in the [1. Introduction to the program](#) section).

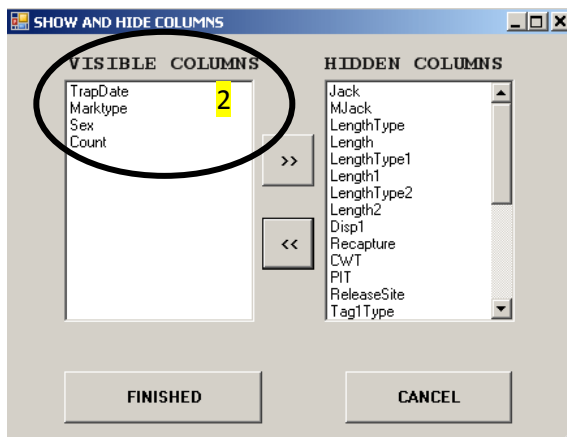
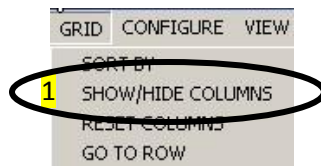
Global attributes

- The species, site or date for an individual record or group of records can be changed.
 - Select one or more records in the grid. Go to EDIT-SPECIES/SITE/DATE, select the relevant information and click finished (see [Species/Site/Date](#) in the [2. Configuring data entry](#) section). These records will then be moved to the appropriate grid by trap location and target species.

5. Viewing trapping data

Grid

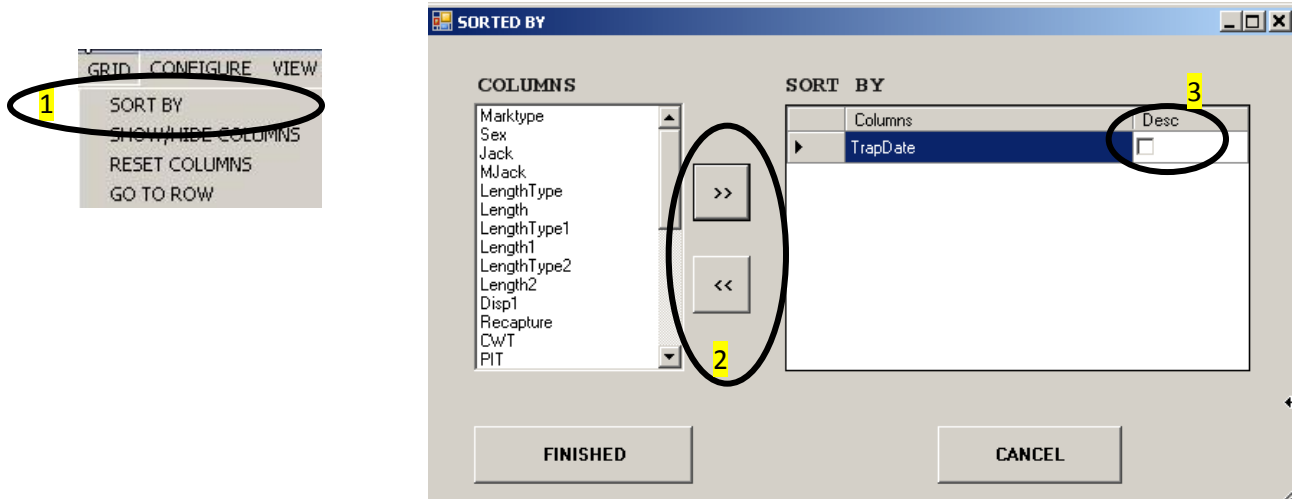
- Data can be viewed in the program in the grid at the bottom of the screen (see [trapping data grid](#) in the [1. Introduction to program](#) section).
 - The species (i.e., target or non-target) to be viewed can be selected by choosing the desired species in CONFIGURE-SPECIES/SITE/DATE menu item (see [Species/site/date](#) in [2. Configuring data entry](#)).
- The columns of the grid can be rearranged to accommodate the individual user's needs.
 - Columns can be moved by clicking and holding a column heading in the grid, and dragging the heading to the desired location.
 - The user can choose to only see certain columns in the grid. (1) Go to GRID-SHOW/HIDE COLUMNS in the menu. (2) The arrows can be used to move columns between the VISIBLE COLUMNS and HIDDEN COLUMNS list. (3) Those columns in the VISIBLE COLUMNS list will be the only ones visible in the grid.



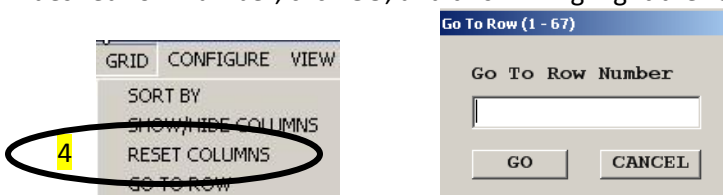
 A screenshot of the data grid. The columns are 'TrapDate', 'Marktype', 'Natural', 'Sex', and 'Count'. The column headers are circled with a black oval, and a yellow '3' is placed next to the circle. The data rows are as follows:

TrapDate	Marktype	Natural	Sex	Count
5/12/2009	AD	<input type="checkbox"/>	M	1
5/12/2009	AD	<input type="checkbox"/>	M	1
5/12/2009	AD	<input type="checkbox"/>	M	1
5/12/2009	AD	<input type="checkbox"/>	M	1
5/12/2009	AURQP	<input type="checkbox"/>	M	1

- Columns can be sorted by selected data attributes. (1) Go to GRID-SORT BY in the menu, select the columns to sort by from the COLUMNS list, and (2) use the arrows to move them to the SORT BY list. (3) Check the DESC box if the data is to be sorted in descending order (uncheck for ascending). The grid can be sorted using multiple attributes; the primary sorting attribute will be at the top of the list.



- The columns can be put back to the default order, with all visible, by going to GRID-RESET COLUMNS in the menu. The grid settings will be maintained, even upon shut down and start up of the program, until this reset menu item is clicked.
- The user can go to a specific row in the grid by using the (4) GRID-GO TO ROW menu item. Enter the desired row number, click GO, and this will highlight the record in the grid.



- The data can be printed showing the current grid configuration by (5) clicking FILE-PRINT. All data for the current target species and site will be printed in the grid configuration set up in the trapping module.



Summary

- A summary of trapping data records can be viewed within the program. Go to VIEW-SUMMARY to open the summary.
 - (1) First, choose the date range for the summary totals. The user can select totals for the entire year, one day only (by selecting a date from the drop-down calendar), or selecting a range of dates (by choosing a start and stop date from the drop-down calendar).
 - (2) The user can choose to see totals with or without recaptures by toggling the INCLUDE RECAPTURES/EXCLUDE RECAPTURES button.
 - (3) Click the REFRESH SUMMARY button to refresh the totals based on the user's selections.
 - (4) The summary gives the totals by sex, marks and dispositions. These totals include the primary species only, from the current site and date. (5) NON TARGET SPECIES (i.e., alternate species) total is given separately at the bottom.
 - IMPORTANT NOTES: the *male totals include Jacks*, so to get number of males that are not jacks the user must subtract the jack total from the male total for each disposition and mark type. Also, not all dispositions are listed (e.g., give aways not shown), so the total fish from ponded and released dispositions will not equal the total trapped.

Summary

Choose Export Date Range:

☒ This years Chinook 1

☐ One Day Only

☐ A Range of Days

REFRESH SUMMARY 3

PRINT

RECAPTURES ARE EXCLUDED

PONDED				RELEASED			
MALE		FEMALE		MALE		FEMALE	
Marked:	20	Marked:	17	Marked:	3	Marked:	3
UnMarked:	5	UnMarked:	5	UnMarked:	1	UnMarked:	2
JACKS		Unknown		JACKS		Unknown	
Marked:	4	Marked:	0	Marked:	0	Marked:	0
UnMarked:	0	UnMarked:	2	UnMarked:	0	UnMarked:	0

TRAPPED

MALE		FEMALE		JACKS		Unknown	
Marked:	27	Marked:	28	Marked:	4	Marked:	0
UnMarked:	6	UnMarked:	7	UnMarked:	0	UnMarked:	2

NON TARGET SPECIES 5

1

Total Trapped: 70

INCLUDE RECAPTURES 2 **MAKE FILE** **FINISHED**

- These data can be exported to a text file or printed using the MAKE FILE and PRINT buttons, respectively.

Recaptures

- Go to VIEW-RECAPTURES on the menu to see total number of recaptures. All recaptures are shown in the grid.

ReCapture Review	
ReCapture Totals	
Today	Total
0	1
<input type="button" value="FINISHED"/>	

Export to Excel

- Trapping data can be exported to Excel by going to DATA-EXPORT TO EXCEL in the menu.
- The user will be prompted to enter (1) the dates of interest or check EVERYTHING for all dates and (2) length frequency data to be exported.

What Data would you like to see?

Start Date

End Date

☐ Everything

LENGTH FREQUENCY

☒ INCLUDE ONLY TRAP DATA
☐ INCLUDE ONLY EVENT DATA
☐ INCLUDE BOTH

- The resulting Excel file will have several different worksheets: the trapping data, event data (see [6. Creating events](#) for explanation of events), and summary sheets with a breakdown of all fish by dispositions (separated by dispositions at the trap and from the ponds; see Events summary in the [6. Creating Events](#) section for details).

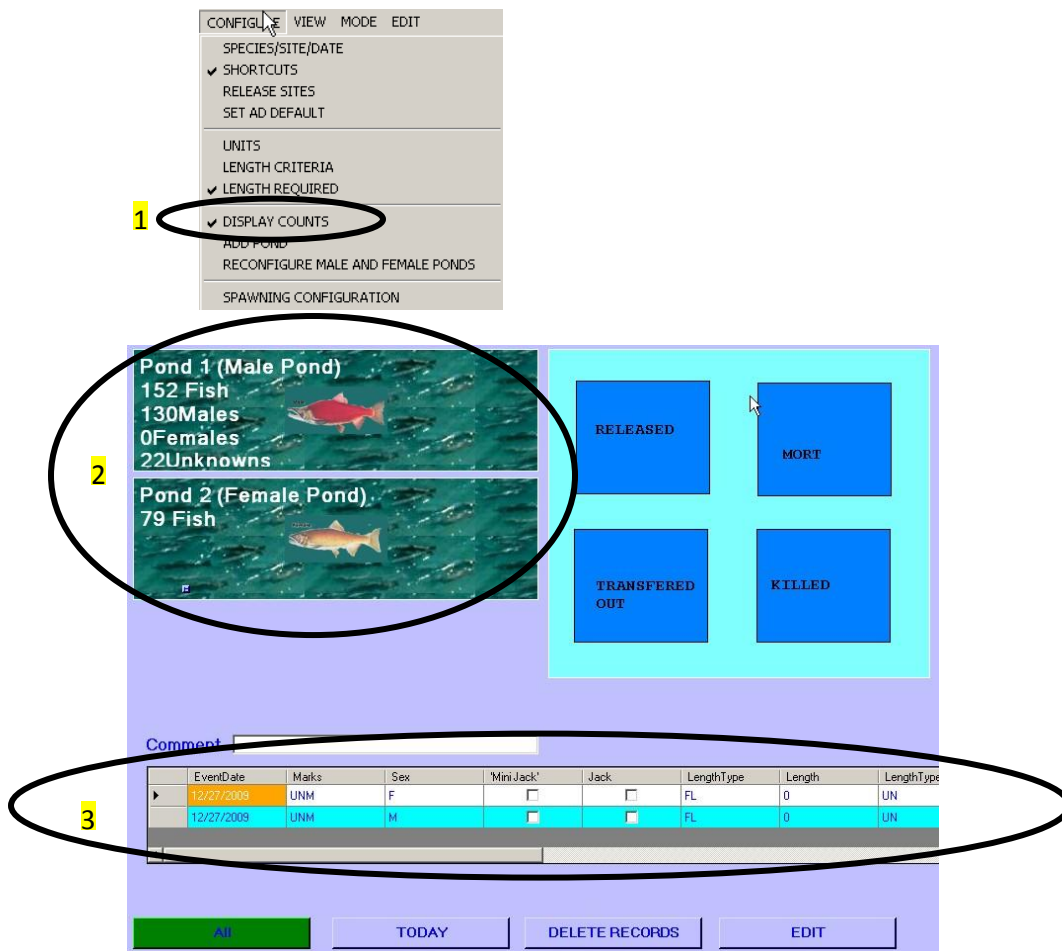
6. Introduction to events module

What is an event?

- The program has two different modules: Trapping and Events
 - Trapping module should be used to enter all the **initial dispositions** of trapped fish **prior to and including ponding**.
 - Events module is used to enter any **changes in fish dispositions** of ponded fish **after ponding**.
- The event types can be classified into three general types:
 - MOVEMENT BETWEEN PONDS
 - NON-SPAWNING EVENTS (transfers out, mortalities, releases after being ponded, fish killed)
 - SPAWNING

Opening the events module and ponded-fish tally

- Click on MODE-EVENTS to get to the events module
 - (1) The user can see the total number of fish in each pond by checking the menu item CONFIGURE-DISPLAY COUNTS. (2) This will update the number of fish in each pond
 - Pond totals will update following each event; users will know total available fish at all times.
 - (3) The events matrix shows all event records.



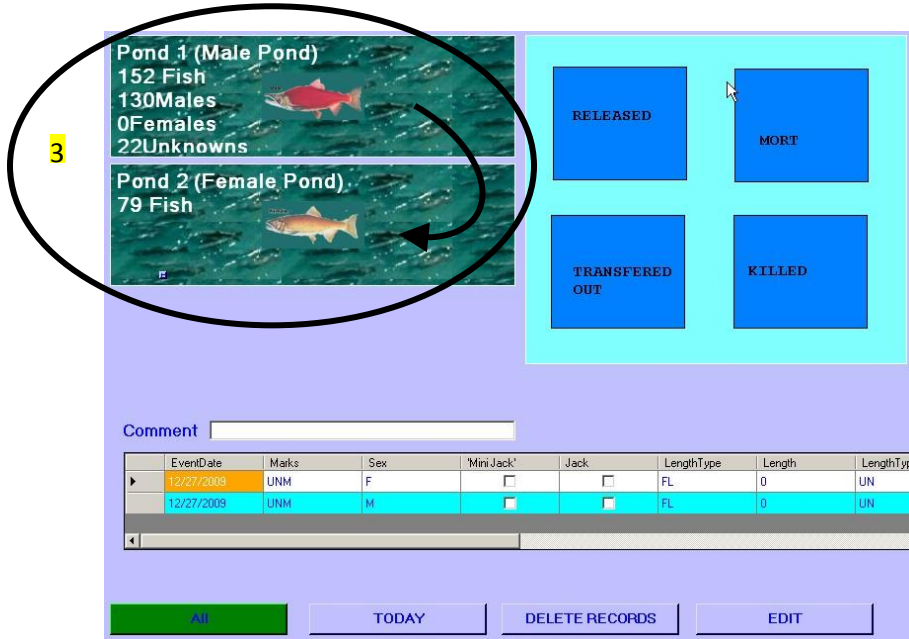
- The user can see the egg tray information for fish that were spawned. (1) Click on MODE-TRAY LOADING. A check mark will appear next to the menu item and (2) the tray loading matrix will appear next to the pond totals. These data show information relevant to associating specific fish with specific egg trays: female ID, bucket number, tray number, lot number, stack number. For a given spawning event, there will be records for each of the female's egg groups and records for each male. **These records are associated with the event record through ?????? attribute.**



7. Entering event data

Events that move fish between ponds

- (3) Movement between ponds can be done by dragging and dropping fish between ponds
 - Click and hold on the fish in one of the ponds. Drag and drop from one pond to another.



- This will prompt the user to enter the number of fish to be moved

How many fish would you like to transfer?

Count

FINISHED

Press Esc To Cancel

- The program first will automatically move fish that match the sex designated for the destination pond. If there are no fish in the source pond of that sex available, then the program will automatically move unknown sex fish. If neither of these are available in the source pond, then the program will automatically move the other sex.
- (1) The event records will appear at the bottom, showing the FISH SOURCE and the new DISPOSITION set to the destination pond.


FishSource	Disposition
Pond 1	Pond 2
Pond 2	Pond 1

Non-spawning events: Released, mort, killed, and transferred out


- For non-spawning events, click on MODE-TRANSFERS. This will enable the non-spawning events page and a checkmark will appear beside the menu item.
 - (2) Click and hold on the fish in one of the ponds. Drag and drop from one pond to the desired disposition box at the right.

2

Pond 1 (Male Pond)
152 Fish
130Males
0Females
22Unknowns



Pond 2 (Female Pond)
79 Fish



RELEASED

MORT

TRANSFERED OUT

KILLED

Comment

EventDate	Marks	Sex	'Mini Jack'	Jack	LengthType	Length	LengthType
12/27/2009	UNM	F	<input type="checkbox"/>	<input type="checkbox"/>	FL	0	UN
12/27/2009	UNM	M	<input type="checkbox"/>	<input type="checkbox"/>	FL	0	UN

- For fish dragged to the RELEASED box, the user will be prompted to (1) enter the number of fish and (2) select release type.
 - RELEASED ABOVE and RELEASED BELOW are for fish that are released from the pond to immediately adjacent to the trap. RELEASED UPSTREAM and DOWNSTREAM are fish released in the same stream but >100 m up or downstream from trap.
 - RELEASED should be used for all other releases away from the trap. This is for fish that will have a disposition of RELEASED OTHER with a different stream location.
 - (3) Specific Release Sites can be chosen by clicking on the RELEASED button and selecting the relevant location. The list of available release locations is setup in the CONFIGURE-RELEASE SITES menu option (see [Release Sites](#) in 2. Configuring Data Entry).
 - GIVEN AWAY is for *live* fish that are taken from the ponds and given to an agency.
 - IMPORTANT NOTE: This initial disposition is only for *live* fish given away from the ponds. Use the KILLED or SPAWNED-KILLED disposition with a carcass disposition of GIVEN AWAY for fish that are killed after ponding and then given away.
 - (3) Specific Agencies can be chosen by clicking on the GIVEN AWAY button and selecting the relevant agency. The list of available agencies is setup in the CONFIGURE-GIVE AWAY AGENCIES menu option (see [Give Away Agencies](#) in 2. Configuring Data Entry).

How many fish are being released?

Big Sheep Creek
Dollar Creek
Mainstem South Fork River
Salmon River

Disposition

☐ Released Above
☐ Released Below
☐ Released Upstream
☐ Released Downstream
☐ Given Away
☒ Released

How Many? 1

Comments

FINISHED OTHER INFO CANCEL

- Click OTHER INFO: (1) This allows the user to enter attributes of the fish to be released, such as lengths, samples, marks or tags. If attributes are added here, the OTHER INFO button will turn green.
 - Specific fish can be fetched by entering tag numbers (PIT or other). (2) Click on OTHER TAGS or PIT, (3) enter the relevant tag information and click FINISHED. (4) If a fish is found, a popup window will indicate that the fish's attributes will be used for the event record.
 - Click FINISHED to include the OTHER INFO attributes in the events record.

The first screenshot shows the 'OTHER TAGS' dialog box. It has a 'Tags' section with checkboxes for 'OPERCULE TAG', 'FLOY TAG', 'JAW TAG', 'RADIO TAG', and 'STAPLE TAG'. Each tag type has a 'NUMBER' field and an 'EXISTING' checkbox. The 'JAW TAG' section is circled with a yellow '3'. Below the tags are 'FINISHED', 'CLEAR', and 'CANCEL' buttons. The 'FINISHED' button is circled with a yellow '4'. A second screenshot shows a 'TrapEntryPlatform' popup window with the message 'An existing tag was found in the trap table, and it's info will be used' and an 'OK' button, also circled with a yellow '4'.

- After all the release attributes are selected, click FINISHED to add the event record. The event record will (5) have the pond of origin as the 'FishSource', (6) the release type as the 'Disposition', and (7) the 'ReleaseSite' will be populated if relevant for the release type. Any attributes entered in OTHER INFO will be included in the record.

The first screenshot shows the 'FINISHED' button in the 'OTHER INFO' dialog, circled with a yellow '5'. The second screenshot shows the resulting event record table. The table has columns: FishSource, Disposition, 'Carcass Disp', CWT, PIT, and ReleaseSite. The first row shows 'Pond 1' in FishSource (circled with a yellow '5'), 'Released Other' in Disposition (circled with a yellow '6'), and 'Big Sheep Creek' in ReleaseSite (circled with a yellow '7').

FishSource	Disposition	'Carcass Disp'	CWT	PIT	ReleaseSite
Pond 1	Released Other		<input type="checkbox"/>		Big Sheep Creek
Dead 1	KILLED		<input type="checkbox"/>		Charleston Drive

- For fish dragged to the TRANSFERRED OUT box, the user will be prompted to (1) select where the transferred out fish are going and (2) the number of fish (HOW MANY). The list of transfer sites includes both hatcheries and traps. Click OTHER INFO to enter attributes of fish to be transferred out (see Non-spawning events-[Other info](#) section above).

How many fish are being transferred out?

1

Crooked River Satellite Fish Hatchery
Eagle Fish Hatchery
McCall Satellite Fish Hatchery
Oxbow Fish Hatchery
Pahsimeroi Fish Hatchery
Powell Satellite Fish Hatchery
Rapid River Fish Hatchery
Red River Satellite Fish Hatchery
Sawtooth Fish Hatchery
McCall Fish Hatchery
Nez Perce Tribal Fish Hatchery

How Many? 1 2

Comments

FINISHED OTHER INFO CANCEL

- After all the transfer attributes are selected, click FINISHED to add the event record. The event record will have (3) the pond of origin as the 'FishSource', (4) TRANSFERRED OUT as the 'Disposition', and (5) the destination hatchery or trap as the 'ReleaseSite'. Any attributes entered in OTHER INFO will be included in the record.

FishSource	Disposition	Carcass Disp'	CWT	PIT	ReleaseSite
3 Pond 1	Transferred Out 4		<input type="checkbox"/>		5 Eagle Fish Hatchery
Pond 1	Released Other		<input type="checkbox"/>		Rio Sheen Creek

- For fish dragged to the MORT box, the user will be prompted to (1) select the type of mortality (POND MORT or PRESPAWN MORT), the (2) carcass disposition, and (3) enter the number of fish. If CARCASS OUTPLANT is selected, (4) a release site must be selected. FINAL DISPOSITION and number of fish (COUNT). The list of available release locations is setup in the CONFIGURE-RELEASE SITES menu option (see [Release Sites](#) in 2. Configuring Data Entry). Click OTHER INFO to enter attributes of the morts (see Non-spawning events-[Other info](#) section above).

- After all the mort's attributes are selected, click FINISHED to add the event record. The event record will have (5) the pond of origin as the 'FishSource', (6) the mort type as the 'Disposition', (7) the carcass disposition as the 'Carcass Disp', and (8) the 'ReleaseSite' will be populated if relevant for the carcass disposition type. Any attributes entered in OTHER INFO will be included in the record.

FishSource	Disposition	'Carcass Disp'	CWT	PIT	ReleaseSite
5 Pond 1	Pond Mort 6	Outplant 7	<input type="checkbox"/>		8 Salmon River
Pond 1	Transferred Out		<input type="checkbox"/>		Fanle Fish Hatchery

- For fish dragged to the KILLED box, the user will be prompted to (1) select a carcass disposition and (2) enter the number of fish. Selection of a carcass disposition is required to enter the record.
 - LANDFILL, PROCESSED FOR NUTRIENT ENHANCEMENT, AND UNKNOWN carcass dispositions do not have the option to enter a location.
 - (3) CARCASS OUTPLANT allows a release location to be selected. The list of available release locations is setup in the CONFIGURE-RELEASE SITES menu option (see [Release Sites](#) section below).
 - (3) GIVEN AWAY allows a give-away agency to be selected. The list of available agencies is setup in the CONFIGURE-GIVE AWAY AGENCIES menu option (see [Give Away Agencies](#) section below).
 - (3) FOOD BANK allows a food bank location to be selected. The list of available food banks is setup in the CONFIGURE-FOOD BANKS menu option (see [Food Banks](#) section below).
 - Click OTHER INFO to enter attributes of the killed fish (see Non-spawning events-[Other info](#) section above).

- After all the killed fish's attributes are selected, click FINISHED to add the event record. The event record will have (4) the pond of origin as the 'FishSource', (5) KILLED as the 'Disposition', (6) the carcass disposition as the 'Carcass Disp', and (7) the 'ReleaseSite' will be populated if relevant for the carcass disposition type. Any attributes entered in OTHER INFO will be included in the record.

FishSource	Disposition	'Carcass Disp'	CWT	PIT	ReleaseSite
4 Pond 1	KILLED 5	Given Away 6	<input type="checkbox"/>		7 Shoshone Bannok Tribe
Pond 1	Pond Mort	Outplant	<input type="checkbox"/>		Salmon Div

Spawning events – Drag and drop

- Individual fish can be spawned using the drag/drop spawning. In the events module, go to MODE- SPAWNING-DRAG AND DROP in the menu.
- This screen shows the (1) ponds, (2) the current spawn date and lot number, (3) the spawning deck (i.e., fish “on deck” to be spawned), (4) the spawning table (i.e., next female to be spawned), and (5) the matrix of event records.
- IMPORTANT NOTE: This section will discuss drag/drop spawning for the default settings. The spawning configuration allows changes to many attributes of the drag/drop spawning operation (see [Spawning configuration](#) section for details).
 - Click and hold on a fish in one of the ponds. Drag the fish from the Male or Female pond and (3) drop it in the Male or Female spawning deck, respectively. The next Female ID number will appear next to the female fish.

Transfer/Kill/Mortality Entry - Test Hatchery - Chinook - Centimeters - 12/31/2009

FILE DATA GRID CONFIGURE VIEW MODE EDIT

1 Pond 1 (Male Pond)
149 Fish
127Males
0Females
22Unknowns

Pond 2 (Female Pond)
79 Fish

2 Spawn Date 12/27/2009 Lot# 3

4

3 Females Males

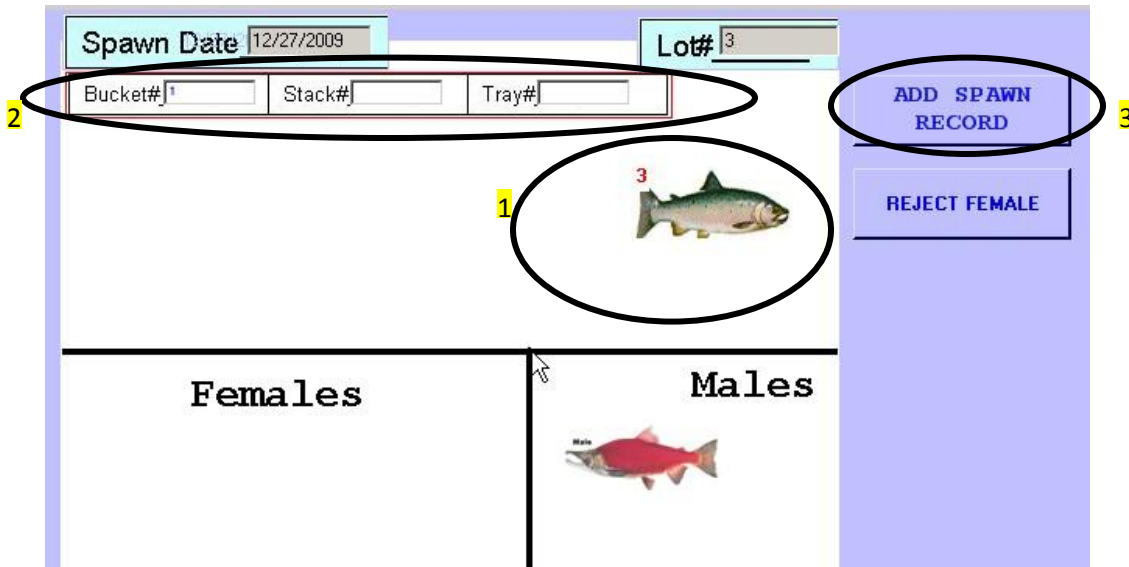
Comment

EventDate	Marks	Sex	'Mini Jack'	Jack	LengthType	Length	LengthType1	Length1
12/31/2009	UNM	M	<input type="checkbox"/>	<input type="checkbox"/>	FL	0	UN	0
12/31/2009	UNM	M	<input type="checkbox"/>	<input type="checkbox"/>	FL	0	UN	0
12/31/2009	UNM	M	<input type="checkbox"/>	<input type="checkbox"/>	FL	0	UN	0

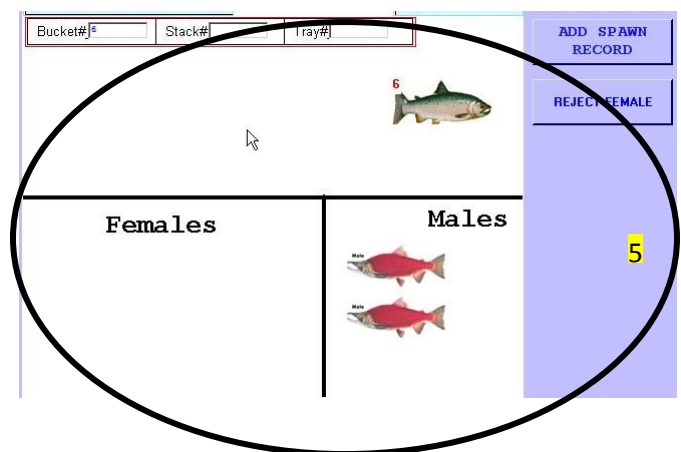
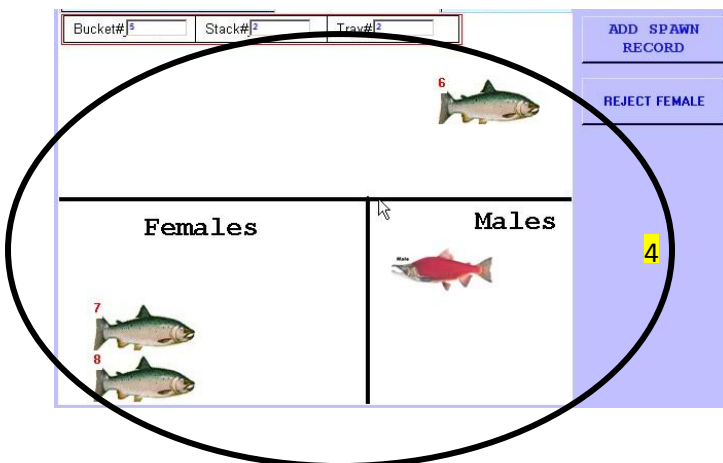
5

All TODAY DELETE RECORDS EDIT

- There are a few different ways to spawn fish in the default drag/drop:
 - Drag 1 Female and 1 Male to spawn deck: (1) Drag female fish to the spawning table. (2) Bucket number (with a label as set in the Spawning Configuration), stack number, and tray number text boxes all can be changed and/or entered here. (3) Click ADD SPAWN RECORD to add the event record. This process spawns 1 Female with 1 Male.



- (4) Drag multiple Females and 1 Male to spawn deck: Drag 1 female fish to the spawning table. Bucket number (with a label as set in the Spawning Configuration), stack number, and tray number text boxes all can be changed and/or entered here. Click ADD SPAWN RECORD to add the event record. This will spawn the 1 Female from the spawning table with the 1 Male from the spawn deck. The other Females will remain on the spawn deck for the next spawning events. Another Male must be added to the spawn deck to spawn the next Female.
- (5) Drag 1 Female and multiple Males to spawn deck: Drag the 1 female fish to the spawning table. Bucket number (with a label as set in the Spawning Configuration), stack number, and tray number text boxes all can be changed and/or entered here. Click ADD SPAWN RECORD to add the event record. This will spawn the 1 Female from the spawning table with however many Males are on the spawn deck.



- After clicking ADD SPAWNING RECORD, the user will be prompted to select the disposition of the male fish after spawning. The default male disposition can be selected in the spawning configuration (see [Spawning configuration](#) section for details).

- A record will be added for each fish that was spawned. The event record will have (1) the pond of origin as the 'FishSource', (2) the spawning-event type as the 'Disposition' (i.e., SPAWNED-KILLED, SPAWNED-REPONDED, SPAWNED-REUSED), and (3) the 'Carcass Disp' populated with the carcass disposition if the fish was spawned-killed. All females will have a disposition of SPAWNED-KILLED.

Sex	FishSource	Disposition	'Carcass Disp'
M	Pond 1	Spawned and Reponded	
F	Pond 2	SPAWNED KILLED	Outplant

Spawning events – Simplified

- Individual fish can be spawned using the simplified spawning, if only basic information for each event is needed. In the events module, go to MODE-SPAWNING-SIMPLIFIED in the menu.
- IMPORTANT NOTE: This section will discuss simplified spawning for the default settings. The spawning configuration allows changes to many attributes of the simplified spawning operation (see [Spawning configuration](#) section for details).
- The simplified screen shows (1) the number of males and females left in ponds, (2) the female ID number, (3) Bucket, Stack and Tray number text boxes, (4) male disposition for the next spawned fish, (5) arrow to add spawning records, (6) arrow to advance female ID numbers, (7) button to reset bucket numbers, and (8) the matrix of event records.

The screenshot shows the 'Simplified Spawning' window. At the top, red text instructions read: 'Pick the Next (>>) button to edit an existing record or enter a new record', 'Pick the Back (<<) button to return to a previous record', 'Press the delete key to delete a spawning record.', and 'Pick Finished when done.' A green button labeled 'ENTER A NEW RECORD' is on the right. Below the instructions, a status bar shows '71 females left' and '144 males left' (callout 1). The main area is split into two columns: 'FEMALE 9' (callout 2) and 'Male'. Under 'FEMALE 9', there is a red arrow button (callout 6). Below this, under the 'Eggs' section, are checkboxes for 'Rejected' (callout 3), 'Lot' (value 3), 'Bucket' (value 3), 'Stack', and 'Tray'. Under the 'Disposition' section (callout 4), there are checkboxes for 'Ponded' (checked), 'Reused', and 'Killed'. At the bottom, there are three buttons: 'RESET BUCKETS' (callout 7), '<<', and '>>' (callout 5). Below these buttons is a table with columns: Marktype, Bucket, Tray, Stack, Disp, and FemID (callout 8).

- Adding a spawning record: (6) Use the red arrow to advance female IDs to desired label. The program automatically uses the next available female ID (used consecutively) as defined in the spawning configuration (see [Spawning configuration](#) for details). (3) Bucket (labeled with next available number, as set in the Spawning Configuration), stack, and tray text boxes all can have labels changed and/or entered. (4) Select disposition for the male. (5) Click the arrow to add the spawning event record.

- The records appear in the matrix of spawning events in the simplified screen (two records; (1) a record for female and (2) a record for male). In this screen, only the basic information is shown: Bucket, tray and stack number, disposition, female ID associated with the spawning event (assigned to both male and female record), and mark type. The default mark type is used for all fish (set in [Spawning configuration](#)). All females will have a disposition of SPAWNED-KILLED.

Marktype	Bucket	Tray	Stack	Disp	FemID	
AD	3			SPAWNED KILLED	17	1
AD				SPAWNED REPONDED	17	2
AD	2			SPAWNED KILLED	16	
AD				SPAWNED REPONDED	16	
AD	1			SPAWNED KILLED	15	
AD				SPAWNED REPONDED	15	

- Click FINISHED when done in simplified spawning; the program will prompt the user to choose the fate of the records entered in simplified view.
 - SAVE CHANGES will keep the records saved in the simplified view, but will not add them to the events matrix shown at the main events module page. This allows the user to come back to simplified spawning and change the records before adding them to the event records.
 - COMMIT CHANGES will add the records to the event record. The records will no longer be editable in the simplified screen (only editable in the main events module page).
 - DROP CHANGES will delete all records created in the *current* session of the simplified screen. Records added to the events records using COMMIT CHANGES from a previous simplified session will not be deleted.

What would you like to do?

Save Changes

Commit Changes

Drop Changes

Spawning events – Bulk

- Groups of fish can be spawned using the bulk spawning, if the only information needed is numbers of males and females and their dispositions. In the events module, go to MODE-SPAWNING-BULK in the menu.
- IMPORTANT NOTE: This section will discuss bulk spawning for the default settings. The spawning configuration allows a few changes to attributes of the bulk spawning operation (see [Spawning configuration](#) section for details).
- The bulk screen shows (1) the number of females spawned, (2) the number of males spawned, and (3) male disposition.

- A record will be added for the groups of fish that were spawned (two records; (4) a record for males and (5) a record for females). The event record will have the pond of origin as the 'FishSource', the spawning-event type as the 'Disposition' (i.e., SPAWNED-KILLED, SPAWNED-REPONDED, SPAWNED-REUSED), and the 'Carcass Disp' populated with the carcass disposition as defined in the spawning configuration if the fish was spawned-killed (see [Carcass disposition for killed fish](#)). All females will have a disposition of SPAWNED-KILLED.

EventDate	Marks	Sex	Wild	Count
1/25/2010	AD	M		4
1/25/2010	AD	F		4
1/25/2010	AD	F		1

8. Configuring data entry – events module

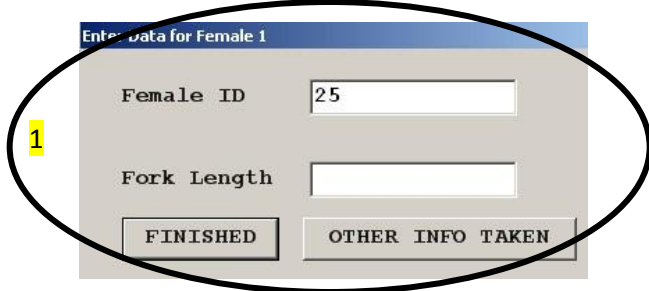
Configuration menu

- Many of the items from the CONFIGURE menu in the trapping module also can be configured in the events module.
 - See [2. Configuring data entry – trapping module](#) for details on the following CONFIGURE menu items: Species/Site/Date, Shortcuts, Set AD default, Release sites, Give away agencies, Food banks, Units, and Length Criteria.

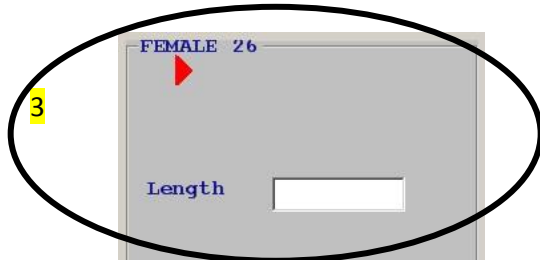


Length Required

- Select the CONFIGURE-LENGTH REQUIRED if the user wants a length to be required for all female fish (a check mark will be seen beside the menu item when selected).
 - Drag/drop: (1) A popup will ask the user to enter the length of the female fish to be spawned. (2) If the user tries to enter a spawning record and a length has not been entered, a pop-up will indicate a length is required.



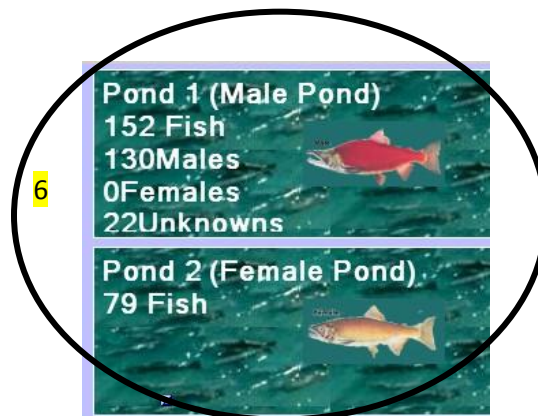
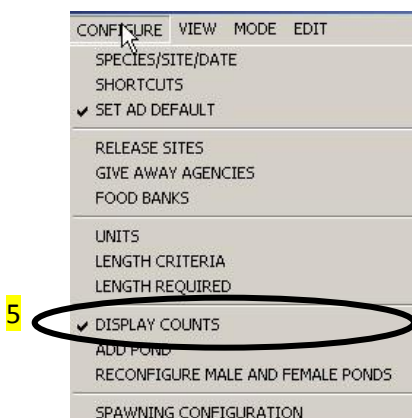
- Simplified: (3) A text box will appear in the female section of the screen. (4) The user will not be able to enter a record until this box has been populated.



- Bulk: The length requirement is ignored for bulk spawning and non-spawning events.

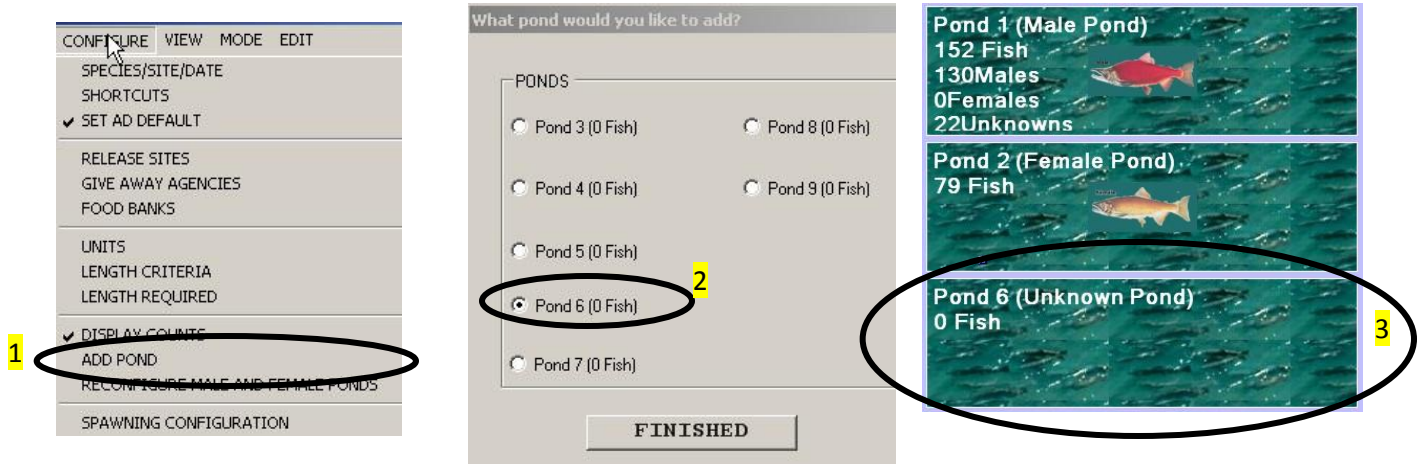
Display counts

- (5) The user can see the total number of fish in each pond by checking the menu item CONFIGURE-DISPLAY COUNTS. (6) This will update the number of fish in each pond
 - Pond totals will update following each event; users will know total available fish at all times.



Add pond

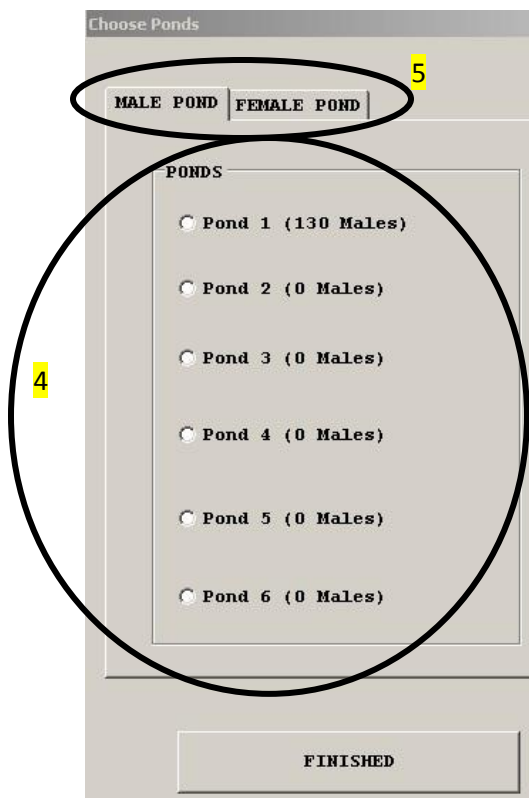
- A third pond can be added to the events module. (1) Click CONFIGURE-ADD POND and (2) select the pond number to add. (3) The pond will be shown in the events module and a check mark will appear next to the menu item. The pond can be removed by clicking on CONFIGURE-ADD POND again and remove the check mark.



- (3) The pond number can be changed by right clicking on the 3rd pond and (2) selecting a different pond.

Reconfigure male and female ponds

- The designated male and female ponds can be changed by clicking CONFIGURE-RECONFIGURE MALE AND FEMALE PONDS. The user can select the pond that will be designated male and the pond that will be designated female by (4) clicking the tab for one of the sexes and (5) selecting the pond to be designated that sex. When spawning fish in simplified and bulk screens, the program will automatically use these ponds to draw the correct sex of fish.



Spawning Configuration

- Many of the spawning operations can be configured to the user's specifications; click on CONFIGURE-SPAWNING CONFIGURATION menu item to open the spawning configuration screen.
- The spawning configuration screen allows the following items to be configured: (1) bucket/bag numbers, (2) egg groups, (3) number of males used per female, (4) options to collect lengths on males, PIT tags and CWT, (5) spawning date and lot number, (6) carcass dispositions, (7) option to automatically load females to spawning deck, (8) females ID numbers, (9) samples, (10) male disposition, and (11) using tags to get specific fish.

The screenshot shows the 'Spawning Configuration' window with various sections and controls. Numbered callouts point to specific features:

- 1**: Bucket/Bag Numbers section, specifically the START and END text boxes.
- 2**: Default Egg Groups text box.
- 3**: Number of Males Used text box.
- 4**: Checkboxes for 'Take Lengths on Males', 'Scan for PIT Tags', and 'Scan for Wire'.
- 5**: Default Spawn Date and Lot Number text boxes.
- 6**: Carcass Disposition For Killed Fish section, with 'Males' and 'Females' buttons and 'Outplant' text boxes.
- 7**: 'Automatically Load Females' checkbox and 'How Many?' spinner.
- 8**: ID Numbers section, including Female ID, Begin At, and Restart at new lot number.
- 9**: Female Sample IDs section, including checkboxes for Genetics, BKD, Ovarian, and Restart at new lot number, along with ID and Begin text boxes.
- 10**: Male Sample IDs section, including checkboxes for Genetics and Restart at new lot number, along with ID and Begin text boxes.
- 11**: Default Male Disposition section with radio buttons for Reused, Reponded, and Killed, and checkboxes for 'Use Female Tags From Trapping' and 'Use Male Tags From Trapping'.

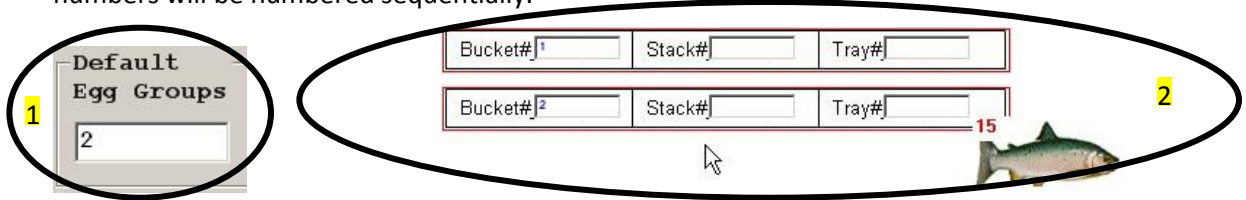
Bucket/bag numbers

- The bucket/bag numbers can automatically be assigned to females and males being spawned with the user-specified labeling scheme.
 - (12) Enter START and END numbers in the text boxes. The bucket numbers will be assigned consecutively. The bucket numbers will go back to START label after the END label is reached.
 - Labels can either be numeric (e.g., 1, 2, 3, ...) or alphanumeric (A1, A2, A3...). Only letters are not allowed. Start number must be lower than the end number. Various alphanumeric combinations can be used to produce consecutive labeling (e.g., START=A1, END=C2; gives consecutive labeling A1, A2, B1, B2, C1, C2).
 - (13) Click RESET to start bucket numbering over from the START number.
 - (14) Click DON'T PRELABEL to manually enter the bucket number in the spawning screens (button turns green when enabled). Bucket numbers will not automatically be populated.

This close-up shows the 'Bucket/Bag Numbers' section. Callout 12 points to the START and END text boxes. Callout 13 points to the 'Reset' button. Callout 14 points to the 'Don't PreLabel' button.

Default egg groups

- The number of egg groups indicates the number of buckets/bags used per one female's eggs. The default is 1 female's eggs per 1 bucket. Up to 4 egg groups can be used per one female.
 - Drag/drop: (1) If the EGG GROUP is set to >1 in the spawning configuration, (2) then the total number of buckets will appear when the female is dragged to the spawning table in drag/drop spawning screen. The one female's eggs will be split between these specific buckets. Bucket numbers will be numbered sequentially.



- After the spawning record is added, the egg bucket and tray information can be seen in the tray loading matrix (see [Tray loading](#)). There will be a record for each bucket and a record for each male.

SpawnID	Spawn Date	Female ID	Bucket No.
4	1/15/2010	11	
4	1/15/2010	11	
5	1/15/2010	12	1
5	1/15/2010	12	
6	1/15/2010	13	1
6	1/15/2010	13	
7	1/15/2010	14	1
7	1/15/2010	14	1
8	1/15/2010	15	1
8	1/15/2010	15	2
8	1/15/2010	15	
1	1/16/2010	16	1
1	1/16/2010	16	2
1	1/16/2010	16	

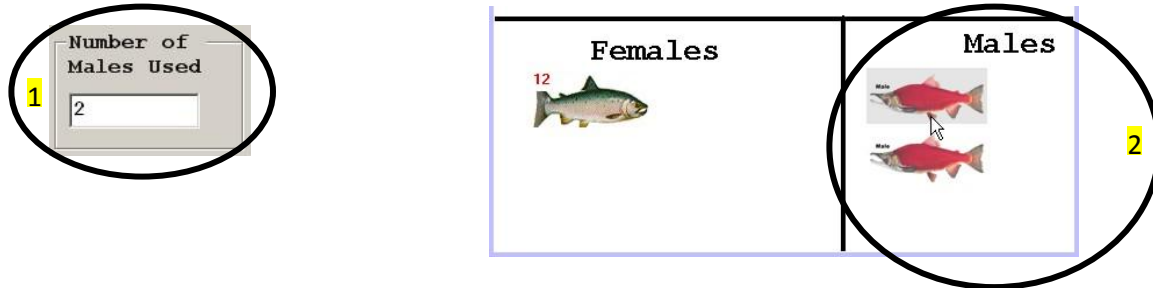
- Simplified: Eggs cannot be split between multiple buckets in simplified spawning. If multiple buckets are set in spawning configuration, when the user switches to simplified spawning, there will be a popup indicating eggs cannot be split.



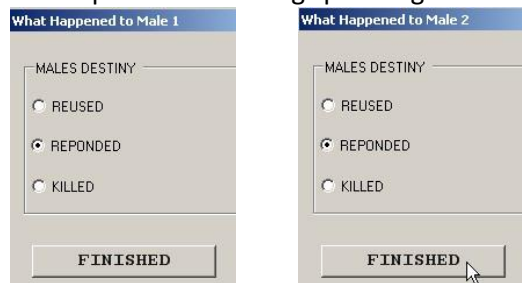
- Bulk: Eggs cannot be split between multiple buckets in bulk spawning.

Number of males used

- The number of males used per one female can be set in the spawning configuration. The default is 1 male per 1 female.
 - Drag/drop: Up to 6 males can be used per 1 female. (1) If the NUMBER OF MALES USED is set to >1 in the spawning configuration, (2) when a male is dragged from the pond to the spawning deck, the number of males indicated in the configuration will automatically appear.



- When the records are added, there will be a popup for each male to indicate their disposition following spawning.



- (3) There will be an event record added for each male and each female used. After the spawning record is added, (4) the egg bucket and tray information can be seen in the tray loading matrix (see [Tray loading](#)). There will be a record for each male and the female, all with the same bucket number.

EventDate	Marks	Sex	*Mini
1/17/2010	AD	M	
1/17/2010	AD	M	
1/17/2010	AD	F	
1/15/2010	AD	M	

SpawnID	Spawn Date	Female ID	Bucket No.
5	1/15/2010	12	
6	1/15/2010	13	1
6	1/15/2010	13	
7	1/15/2010	14	1
7	1/15/2010	14	1
8	1/15/2010	15	1
8	1/15/2010	15	2
8	1/15/2010	15	
1	1/16/2010	16	1
1	1/16/2010	16	2
1	1/16/2010	16	
1	1/17/2010	17	1
1	1/17/2010	17	1
1	1/17/2010	17	1

- Simplified: Up to 2 males can be used per 1 female. If the NUMBER OF MALES USED is set to >1 in the spawning configuration, when the simplified spawning screen is opened, (1) boxes for each of the males indicated in the configuration will appear.
 - (2) The disposition of each male after spawning can be selected by checking the appropriate box.
 - There will be an event record added for each male and each female used similar to those described in the [drag/drop section](#) above.

- Bulk: The number of males used is ignored for bulk spawning.

Take length on Males

- The user can require that lengths are taken on each male spawned. (3) In the spawning configuration, check the box TAKE LENGTHS ON MALES.
 - Drag/drop: When the user drags a male fish to the spawning deck, (4) a popup with a text box to enter the male length will appear. If more than one male is spawned per female, (5) a text box for each male will appear sequentially.

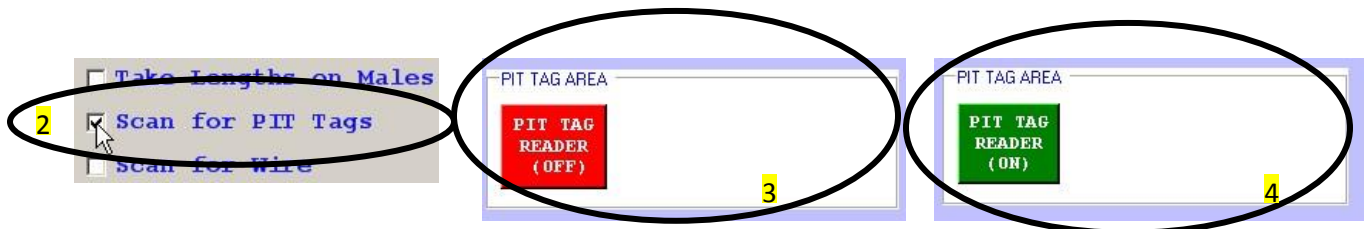
- (1) The events record will have lengths for each male spawned.

EventDate	Marks	Sex	'Mini Jack'	Jack	LengthType	Length
1/20/2010	AD	M	<input type="checkbox"/>	<input type="checkbox"/>	FL	65
1/20/2010	AD	M	<input type="checkbox"/>	<input type="checkbox"/>	FL	77
1/20/2010	AD	F	<input type="checkbox"/>	<input type="checkbox"/>	FL	0

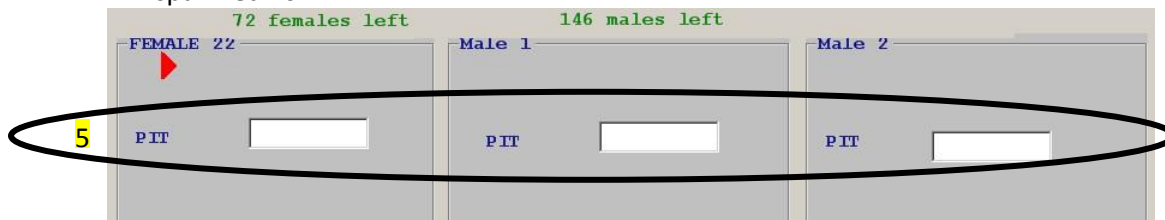
- Simplified: Text boxes will appear in each of the male boxes to enter the lengths. These lengths will appear in the event records. Not working right now...need to add figure when corrected.
- Bulk: The length requirement is ignored for bulk spawning.

Scan for PIT tags

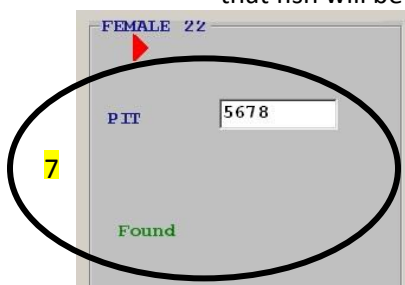
- PIT tags can be scanned and this information will be included with the spawning event records. Specific fish can be selected for spawning events using PIT tags. (2) In the spawning configuration, check the box SCAN FOR PIT TAGS.
 - Drag/drop: (3) The PIT reader button appears to the right of the spawning table. The PIT reader is enabled by clicking the PIT button ((4) button turns green when enabled). When the PIT reader is enabled, the user can scan for a PIT tag on a fish; this PIT information will be included in the event record for the spawned fish. If the PIT tag was entered in the trapping records, all the previously collected information associated with that fish will be fetched to be entered with the event record.



- Simplified: (5) Text boxes will appear in each of the fish boxes to enter PIT tags. These lengths will appear in the event records. (6) This PIT information will be included in the event record for the spawned fish.



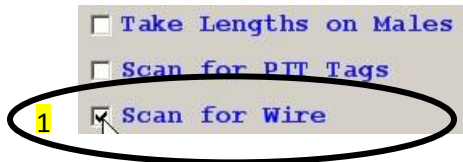
- If the specific PIT tag was entered in the trapping records, (7) the simplified screen will indicate the unique fish was found. All the previously collected information associated with that fish will be fetched to be entered with the event record.



Disposition	'Carcass Disp'	CWT	PIT
SPAWNED RE...		<input type="checkbox"/>	
SPAWNED RE...		<input type="checkbox"/>	
SPAWNED KILL...	Outplant	<input type="checkbox"/>	5678

Scan for wire

- The presence of CWT can be indicated for spawned fish in spawning event records. (1) In the spawning configuration, check the box SCAN FOR WIRE.



- Drag/drop: No change in the drag/drop screen. CWT can be added by right clicking on the fish and selecting OTHER INFO button.
- Simplified: (2) Check boxes will appear in each of the fish boxes to indicate the presence of CWT for the fish to be spawned. (3) The presence/absence of CWT will appear in the spawning event records.



Disposition	'Carcass Disp'	CWT
SPAWNED RE...		<input checked="" type="checkbox"/>
SPAWNED RE...		<input checked="" type="checkbox"/>
SPAWNED KILL...	Outplant	<input checked="" type="checkbox"/>
Spawned and Re...		<input type="checkbox"/>

Default spawn date and lot number

- (4) The spawning date and lot numbers can be set for all spawning event records by entering this information in the spawning configuration. This information will be assigned to all (5) spawning event records and (6) egg tray/loading records (see [Tray loading](#)) until new information is entered in the spawning configuration. The information is not editable in any of the spawning screens.



EventDate	Marks	Sex	'Mini Ja
1/15/2010	AD	M	
1/15/2010	AD	F	
1/15/2010	AD	M	

SpawnID	Spawn Date	Female ID	Bucket No.	Tray No.	Lot No.
8	1/15/2010	15	1		3
8	1/15/2010	15	2		3
8	1/15/2010	15			3
1	1/15/2010	16	1		3

- Drag/drop: The spawn date and lot number will be visible above the spawning table. This information will not be editable in the drag/drop screen.



- Simplified: (1) Lot number will be visible below the female box. This information will not be editable in the simplified screen. Spawn date is not shown but will be entered with records.

A screenshot of a form with four input fields. The first field is labeled 'Lot' and contains the number '3'. It is circled with a black oval and has a yellow '1' next to it. Below it are fields for 'Bucket' (containing '2'), 'Stack', and 'Tray'.

- Bulk: Spawn date and lot number are not shown but will be entered with records.

Carcass disposition for spawned-killed fish

- The default carcass disposition can be set for all fish that are killed *following spawning* (see [changing disposition buttons](#) for definition of carcass disposition). (2) Click on one of the buttons (male or female). (3) Select carcass disposition type from the popup.

A screenshot of a dialog box titled 'Carcass Disposition For Killed Fish'. It has two red buttons: 'Males' and 'Females'. The 'Males' button is circled with a black oval and has a yellow '2' next to it. To the right of the buttons are two text boxes, both containing the word 'Outplant'.

- LANDFILL, PROCESSED FOR NUTRIENT ENHANCEMENT, AND UNKNOWN carcass dispositions do not have the option to enter a location.
- (4) GIVEN AWAY allows a give-away agency to be selected. The list of available agencies is setup in the CONFIGURE-GIVE AWAY AGENCIES menu option (see [Give Away Agencies](#) section below).

A screenshot of a 'Final Disposition' dialog box. It has a 'SPAWN KILLED' section and a 'CARCASS DISPOSITION' section. In the 'CARCASS DISPOSITION' section, the 'GIVEN AWAY' radio button is selected and circled with a black oval, with a yellow '3' next to it. To the right, there is a text box labeled 'Who are you giving the Carcasses to?' containing 'MK Nature Center' and 'Shoshone Bannok Tribe'. This text box is circled with a black oval and has a yellow '4' next to it. At the bottom are 'FINISHED' and 'CANCEL' buttons.

- (1) FOOD BANK allows a food bank location to be selected. The list of available food banks is setup in the CONFIGURE-FOOD BANKS menu option (see [Food Banks](#) section below).

The screenshot shows the 'Final Disposition' window. On the left, under 'CARCASS DISPOSITION', the 'FOOD BANK' radio button is selected. On the right, a text box is titled 'Which food bank are they going to?' and contains the text 'test'. A yellow '1' is next to the text box.

- (2) CARCASS OUTPLANT allows a release location to be selected. The list of available release locations is setup in the CONFIGURE-RELEASE SITES menu option (see [Release Sites](#) section below).

The screenshot shows the 'Final Disposition' window. On the left, under 'CARCASS DISPOSITION', the 'CARCASS OUTPLANT' radio button is selected. On the right, a list box is titled 'Which food bank are they going to?' and contains the following list of release locations: Big Sheep Creek, Dollar Creek, Mainstem South Fork River, and Salmon River. A yellow '2' is next to the list box.

- After the carcass disposition attributes are selected, click FINISHED. (1) The selected carcass disposition will be visible in the spawning configuration screen. (2) The spawning event records for fish that were spawned-killed will have the pond of origin as the 'FishSource', SPAWNED-KILLED as the 'Disposition', the carcass disposition as the 'Carcass Disp', and the 'ReleaseSite' will be populated if relevant for the carcass disposition type.

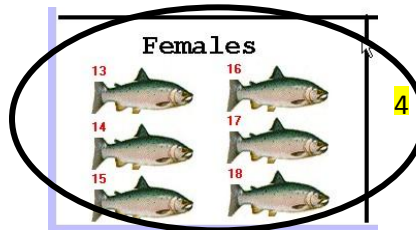
Carcass Disposition For Killed Fish

FishSource	Disposition	'Carcass Disp'	CWT	PIT	ReleaseSite
Pond 1	Spawned Killed	Outplant	<input type="checkbox"/>		Dollar Creek
Pond 2	SPAWNED KILLED	Processed	<input type="checkbox"/>		
Pond 3	Spawned and Released		<input type="checkbox"/>		

Automatically load females

- (3) Checking the AUTOMATICALLY LOAD FEMALES box and selecting the number of fish will allow the user to (4) automatically load several female fish to the spawning deck with one drag and drop. Up to 6 fish can be automatically loaded. Autoloading is not available in simplified or bulk spawning screens.

☒ **Automatically Load Females**
 How Many?



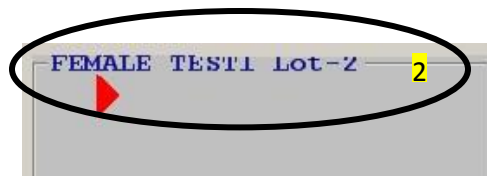
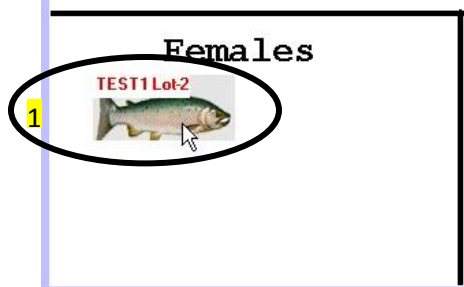
Female ID numbers

- The method of enumerating female fish can be set in the spawning configuration. The Female ID will be associated with all spawning records and all egg groups from one female (using drag/drop and simplified spawning screens; not available for bulk records).
 - (5) The FEMALE ID text box shows a representation of how the female ID will look in the spawning record. Any combination of user-defined text, sequential numbering and lot numbers can be used in the female ID. The text box must be populated before closing the spawning configuration.
 - Sequential numbering: Enter XXX in the text box to include sequential numbers in the female ID.
 - Lot number: Enter LLL in the text box to include the current lot number in the female ID.
 - (6) The BEGIN AT text box indicates the start value for sequential numbering. Any positive number is accepted. If left blank, the program will automatically use the next available number following previous configuration.
 - (7) The checkbox RESTART AT NEW LOT NUMBER allows the user to make the females ID numbers start over when lot number is changed (program allows the same female ID to be used multiple times if they have different lot numbers).

Enter IDs as follows TxtXXX, XXXTxt, or TxtXXXTxt Where XXX is sequential.
 TxtXXX LLL becomes Txt1 Lot-1 when using LLL

ID NUMBERS
 Female ID
 Begin At
☐ Restart at new lot number

- For this example, FEMALE ID is entered as “testXXX LLL” and BEGIN AT entered as “1”. The female ID is seen when (1) a fish is dragged to the spawning deck in drag/drop and (2) at the top of the female box in simplified spawning screen. Female IDs are not used for bulk spawning.



- (3) These female IDs are seen in the egg tray matrix after the spawning record is added (see [Opening the events module-Tray loading](#) for details on switching to the egg tray matrix).

SpawnID	Spawn Date	Female ID	Bucket No.	Tray No.	Lot No.
1	1/25/2010	7	1		2
1	1/25/2010	7	1		2
2	1/25/2010	8	1		2
2	1/25/2010	8	1		2
3	1/25/2010	9	2		2
3	1/25/2010	9	2		2
4	1/25/2010	10	3		2
4	1/25/2010	10	3		2
5	1/25/2010	12	5		2
5	1/25/2010	12			2
6	1/25/2010	11	4		2
6	1/25/2010	11			2
1	1/26/2010	TEST1 Lot-2	1		2
1	1/26/2010	TEST1 Lot-2	1		2

Female and Male Sample IDs

- The user can indicate if samples are to be taken on females or males after spawning. Sample information can be captured using drag/drop and simplified spawning screens (not available for bulk records).
 - (1) The type of available samples for each sex is shown. Check appropriate box for the type of samples to be taken.
 - Sample IDs can be defined similarly to the female IDs. (2) In the ID text box, any combination of user-defined text, sequential numbering and lot numbers can be used in the sample IDs. The text box must be populated if the sample type is selected before closing the spawning configuration.
 - Sequential numbering: Enter XXX in the text box to include sequential numbers in the sample ID.
 - Lot number: Enter LLL in the text box to include the current lot number in the sample ID.
 - (3) The BEGIN text box indicates the start value for sequential numbering. Any positive number is accepted. If left blank, the program will automatically use the next available number following the previous configuration.
 - (4) The checkbox RESTART AT NEW LOT NUMBER allows the user to make the sample ID numbers start over when lot number is changed (program allows the same sample ID to be used multiple times if they have different lot numbers).

- (5) The user also can choose to use the Female ID numbers for all sample IDs by checking the USE FEM ID for the relevant sample type. The ID and BEGIN text boxes will be grayed out with the female ID definition visible.

- The sample information is shown in the event matrix after the spawning event record is added.
 - (1) The box under the SAMPLES field will be checked if samples were taken
 - SAMPLE VALUES field will be populated with the sample type followed by the sample ID.
 - (2) GEN will be sample type for genetics.

ID		Begin
<input checked="" type="checkbox"/> Genetics	WWXXX	1

Samples	SampleValues
<input checked="" type="checkbox"/> (1)	GEN:WW1 (2)

- (3) PAT will be sample type for BKD samples.

ID		Begin
<input type="checkbox"/> Genetics	XXX	1
<input checked="" type="checkbox"/> BKD	TTXXX	1

Samples	SampleValues
<input checked="" type="checkbox"/> (3)	PAT.TT1

- (4) PAT will be sample type for Ovarian samples. If both Ovarian and BKD samples are taken simultaneously, the sample names must be different because both of these samples are pathology samples. (5) A popup indicating this error will appear if the same sample names are entered.

ID		Begin
<input type="checkbox"/> Genetics	XXX	1
<input type="checkbox"/> BKD	XXX	1
<input checked="" type="checkbox"/> Ovarian	SSXXX	1

Samples	SampleValues
<input checked="" type="checkbox"/> (4)	PAT.SS1

TrapEntryPlatform
 Ovarian and BKD Samples must have different numbers since they are both pathology samples
 OK (5)

- (6) If female IDs are to be used for Ovarian samples, (7) the sample type and sample values will be followed by (OVA) to indicate these are Ovarian samples. The reason for this is to prevent duplicate sample numbers between female BKD and Ovarian samples if female IDs were to be used for both sample IDs.

ID Numbers	
Female ID	Begin At
TESTXXXLLL	1
<input type="checkbox"/> Restart at new lot number	

Female Sample IDs	
ID	Begin
<input type="checkbox"/> Genetics	XXX 1
<input type="checkbox"/> BKD	PPYYY 1
<input checked="" type="checkbox"/> Ovarian	TESTX 1

Samples	SampleValues
<input checked="" type="checkbox"/> (7)	PAT:TEST6 Lot-2 (OVA)

Default Male dispositions

- (8) The default dispositions for spawned males can be set by selecting the appropriate disposition.
 - (9) When a record is added in drag/drop screen, the popup asking for the male disposition will default to the disposition selected in the spawning configuration.

Default Male Disposition:
☐ Reused
☐ Reponded
☒ Killed (8)

What Happened to Male 1
 MALES DESTINY
☐ REUSED
☐ REPONDED
☒ KILLED (9)
 FINISHED

- When a record is added in simplified screen, (1) the male disposition in the male box will default to the disposition selected in the spawning configuration.

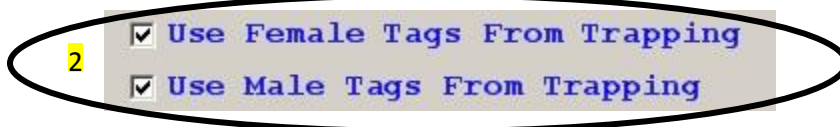


Disposition

☐ Pondered ☐ Reused ☒ Killed 1

Use Female/Male tags from trapping

- Trapping records for specific fish can be fetched for spawning using tag information. Fish can be retrieved using PIT or other tag (e.g., Jaw, Radio, etc.) information. (2) Check the box to use tags to fetch specific fish.

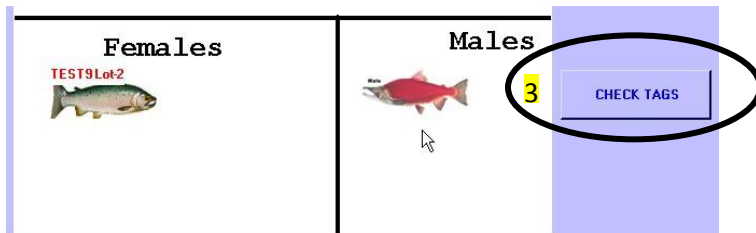


2

☒ Use Female Tags From Trapping

☒ Use Male Tags From Trapping

- Drag/drop: (3) The button CHECK TAGS will be seen in the drag/drop screen. After fish are dragged to the spawning deck, click CHECK TAGS. (4) A popup will appear where tag numbers can be entered in a text box. If tags are to be checked for both sexes, (5) the user can click on the tabs to move to the other sex. When the user starts entering information, the program indicates the status of the retrieval. (6) The program indicates FOUND when the specific trapping record is found.



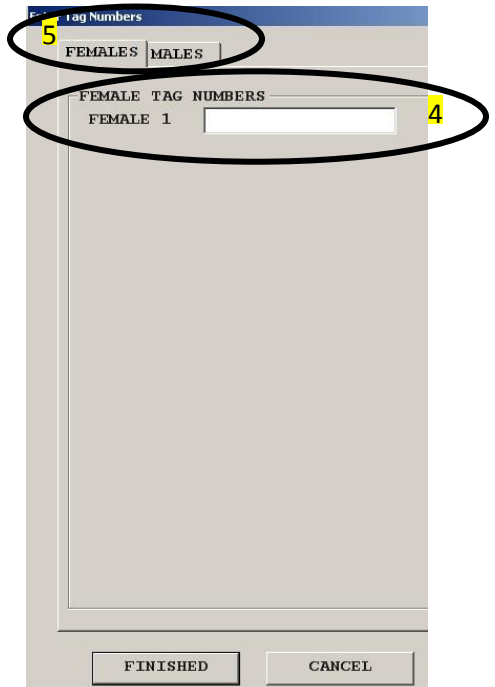
Females

TEST9Lot2

Males

3

CHECK TAGS



5

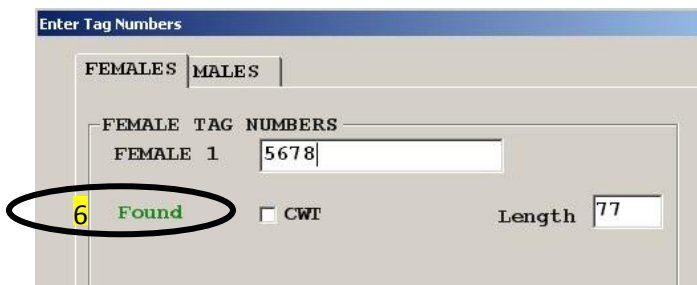
Tag Numbers

FEMALES MALES

FEMALE TAG NUMBERS

FEMALE 1 4

FINISHED CANCEL



Enter Tag Numbers

FEMALES MALES

FEMALE TAG NUMBERS

FEMALE 1 5678

6 Found

☐ CWT

Length 77

- After the spawning record is added, (1) all the information from the retrieved trapping record (e.g., sex, length, etc.) will be associated with the spawning records including the tag number.

EventDate	Marks	Sex	'Mini Jack'	Jack	LengthType	Length
1/28/2010	AD	M	<input type="checkbox"/>	<input type="checkbox"/>	FL	0
1/28/2010	AD	F	<input type="checkbox"/>	<input type="checkbox"/>	FL	77
1/28/2010	AD	M	<input type="checkbox"/>	<input type="checkbox"/>	FL	0

Disposition	'Carcass Disp'	CWT	PIT
Spawned Killed	Outplant	<input type="checkbox"/>	
1 SPAWNED KILLED	Processed	<input type="checkbox"/>	5678
Spawned Killed	Outplant	<input type="checkbox"/>	

- If the tag number entered for one sex was initially associated with the other sex at trapping, (2) a popup will appear to warn the user that a different sex will be associated with the spawning record. The user can either allow this change in sex for the specific fish or the user can delete the characters, switch to the other sex and re-enter the tag number.



- Simplified: (3) Tag numbers can be entered in text boxes for the relevant sexes. (4) The program indicates when the tag is found and (5) adds the information in the simplified event matrix when the record is added. After the spawning records are committed (by clicking FINISHED-COMMIT CHANGES), all the information from the retrieved trapping record (e.g., sex, length, etc.) will be associated with the spawning records including the tag number.

42 females left

166 males left

FEMALE TEST10 Lot-2

Tag ID

Male

Tag ID

FEMALE TEST10 Lot-2

Tag ID

Found

Marktype	TagType	TagID
AD		fff
AD		

9. Viewing event data

Events summary

- Click on VIEW-SUMMARY in the events module to get a summary of all dispositions.
- (1) Choose the dates of interest for the summary totals and click REFRESH SUMMARY to get new totals
 - (2) TRAP tab shows the totals for all initial dispositions (prior to ponding), broken down by sex
 - (3) POND tabs show the final disposition totals for all fish that were initially ponded, broken down by sex, for the current date
 - "TRAPPED" is the total number of fish trapped and sent to this pond up to the current date
 - "LIVE FISH" = "TRAPPED" – (total of all other dispositions in this pond). This is the number of live fish that are on hand on the current date in this pond. This total should be zero at the end of the season because all fish have been sent to their final disposition and there are no more fish in the pond.
- Each tab shows the final disposition totals for each pond.
- The layout of this summary is the same as the summary information that will be exported to Excel using the DATA-EXPORT TO EXCEL menu item.

Summary

Choose Export Date Range

☒ This years Chinook 6/ 7/2009 **1**

☐ One Day Only

☐ A Range of Days

TOTAL INVENTORY
49 FISH

Trap POND 1 POND 2 Pond3 **2** **3**

Disposition	Total	Total Males	Total Females	Total Unknowns	Marked Males	UnMarked Males	Marked Females	UnMarked Females	Marked Unknowns	UnMarked Unknowns
LIVE FISH	44	24	18	2						
TRAPPED	0	0	0	0	0	0	0	0	0	0
POND MORTS	0	0	0	0	0	0	0	0	0	0
SPAWNED KILLED	0	0	0	0	0	0	0	0	0	0
SPAWNED RE-USED/RE...	0	0	0	0	0	0	0	0	0	0
KILLED	0	0	0	0	0	0	0	0	0	0
TRANSFERED IN	0	0	0	0	0	0	0	0	0	0
TRAANSFERED OUT	0	0	0	0	0	0	0	0	0	0
RELEASED	0	0	0	0	0	0	0	0	0	0

REFRESH SUMMARY **PRINT** **MAKE FILE** **FINISHED**

10. Ancillary data input

Trap operations

- Trapping Operations are a record of the day to day operation of the trap. It is a way to capture days of operation and efficiency of traps. Go to MODE-TRAP OPS on the menu to get the trap operations window.
 - (1) Top pane is where the user can enter trap information. (2) Bottom pane shows the records to be added to the database.

TRAP OPERATIONS

FILE DATA

Date	Operation Type	Operation Description
8/26/2009	Installat...	trap put in
8/28/2009	Non Opera...	somethin broken

ADD EDIT DELETE

ID	Date	Operation Type	Operation Description	Uploaded
1	8/19/2009	Worked Up	New records were added	<input type="checkbox"/>
1	8/26/2009	Installation	trap put in	<input type="checkbox"/>
1	8/28/2009	Non Operati...	somethin broken	<input type="checkbox"/>
1	8/31/2009	Removal		<input type="checkbox"/>

FINISHED

- (3) Click on DATE in upper pane. Date can either be typed manually or selected from the drop-down calendar.
- (4) Click on drop-down menu for OPERATION TYPE. Operation type can be selected from INSTALLATION, REMOVAL, NON-OPERATIONAL, CHECKED, or PARTIALLY OPEN.
- (5) Detailed text for the trap operation can be entered in the OPERATION DESCRIPTION field (e.g., explanation such as "Partial operation due to high water").
- (6) Click ADD to add records to bottom pane.

TRAP OPERATIONS

FILE DATA

Date	Operation Type	Operation Description
8/26/2009	Installation	trap put in
8/28/2009	Installation	somethin broken

ADD EDIT DELETE

ID	Date	Operation Type	Operation Description	Uploaded
1	8/19/2009	Worked Up	New records were added	<input type="checkbox"/>
1	8/26/2009	Installation	trap put in	<input type="checkbox"/>
1	8/28/2009	Non Operati...	somethin broken	<input type="checkbox"/>
1	8/31/2009	Removal		<input type="checkbox"/>

FINISHED

- After adding records, they can be edited. (1) Select a record by clicking on the row for the record in the bottom pane, (2) then click EDIT button. (3) The selected record will appear in the upper pane and the EDIT button will turn green when in edit mode. The record can then be edited in the upper pane.
- (4) Records can also be deleted by selecting the record and clicking DELETE button. A popup will ask the user they are sure they want to delete.

	Date	Operation Type	Operation Description
3	* 8/28/2009	Non Opera...	somethin broken

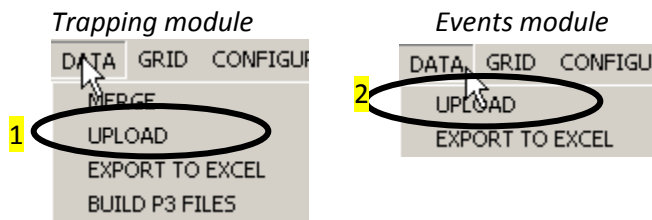
UPDATE 2 EDIT DELETE 4

	ID	Date	Operation Type	Operation Description
	1	8/19/2009	Worked Up	New records were added
	1	8/26/2009	Installation	trap put in
1	1	8/28/2009	Non Operati...	somethin broken
	1	8/31/2009	Removal	

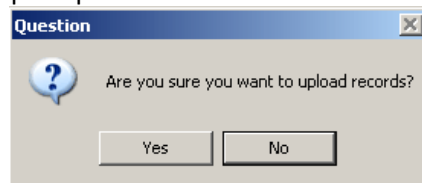
- Click FINISHED to save operation records to database.

11. Uploading data

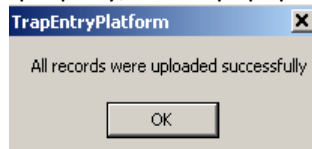
- After all editing of data in the grid, the data must be uploaded from the local database (Trap.mdb) to the central HDMS database (SQL Server). The trapping program saves all trapping and event data locally on the computer which was used to enter the data, to a file at C:\HDMS\Trap.mdb. The data in this file must be uploaded to the Central database at HQ via the internet.
 - (1) Trapping data can be uploaded by going to the menu item DATA-UPLOAD in the trapping module. In the trapping module, the UPLOAD command will only upload trapping data. (2) If the user would like to upload event data, the UPLOAD command in the events module must be used.



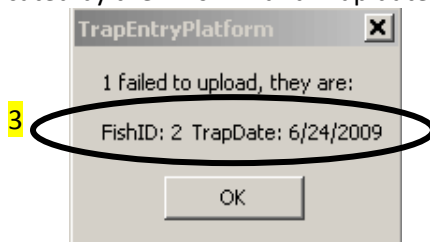
- The user will be prompted to make sure that the data are ready to upload.



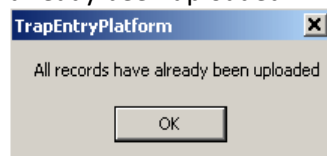
- As the data is uploading, there will be a status popup to show how the upload is progressing.
- If all files upload properly, then a popup will indicate the upload was successful.



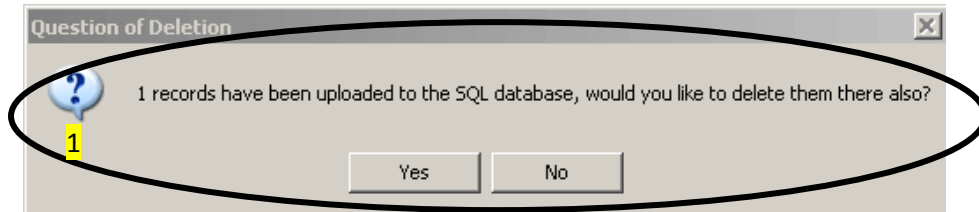
- A popup will indicate if there are some errors with the upload. (3) Any records that were not uploaded will be indicated by their Fish ID and Trap date.



- If all the records have already been uploaded and have not been edited, then a popup will indicate that all the data had already been uploaded.



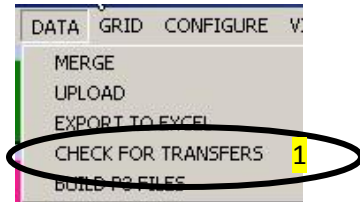
- If changes are made to the records in the program and local database, these changes will be propagated to the central database.
 - (1) After upload, if the user deletes some records in the grid, they will be asked if they want to delete these records from the central SQL database as well. If the user answers YES to this popup, these data will no longer be available.
 - IMPORTANT NOTE: DO NOT prepare for a new trapping year by deleting all the previous year's data from the local database. If the records are deleted from the central SQL database when prompted, this will delete all the previous year's data from the central database and it will no longer be accessible. Prepare for a new season of trapping using the method described in [10. Archiving data](#).



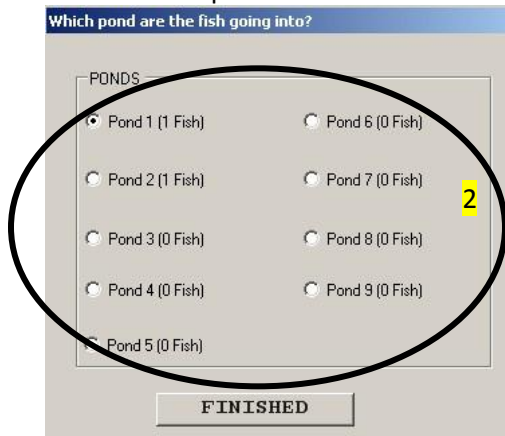
- If the user edits and changes records in the grid, the data will need to be re-uploaded
 - The re-upload will overwrite the original records with the changed records.
 - A log will be created as to the user who made changes to the records

12. Checking for transfers

- If a facility expects to get fish transferred in from other facilities, hatchery personell will need to check for transfers. In the following explanation, the facility where the fish were trapped will be referred to as the “source facility” and the dispoisiton will be TRANSFERRED OUT for those fish. The facility that recieves the transferred fish will be referred to as the “destination facility”.
 - Before checking for transfers, the source facility must first upload the TRANSFERRED OUT records to the central database (see section [11. Uploading data](#)).
 - Change the Species/Site/Date to the destination facility (see section [Species/Site/Date](#)). In either the trapping or events module, click on the menu item (1) DATA-CHECK FOR TRANSFERS.



- A popup asks if the user wants to continue with the checking for transfers. By clicking OK, the transfer records for the destination facility (i.e., transfers in) will be copied both to the local database (Trap.mdb) and to the central HDMS database (SQL Server). (2) A popup will then prompt the user to select the pond at the destination facility into which the fish will be going; click FINISHED to accept selection.



- The transferred in records will be seen in both the trapping and events modules. The events module at the destination facility will have (3) the disposition listed as the pond the fish were put into with (4) the FISHSOURCE field set to the source facility’s trap, and (5) the COUNT field with the total number fish transferred.

Events module – Destination facility



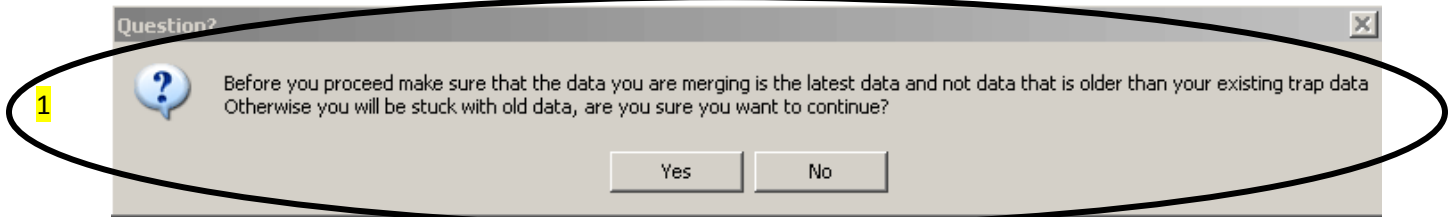
- The trapping module at the destination facility will have (1) the disposition listed as TRANSFERRED IN, (2) the TRAPSITE as the destination trap, and (3) the COUNT field with the total number fish transferred. The trapping module matrix does not show the FISHSOURCE.

Disp1	2	TrapSite	3
Transferred In		Redfish Lake Creek Trap	5

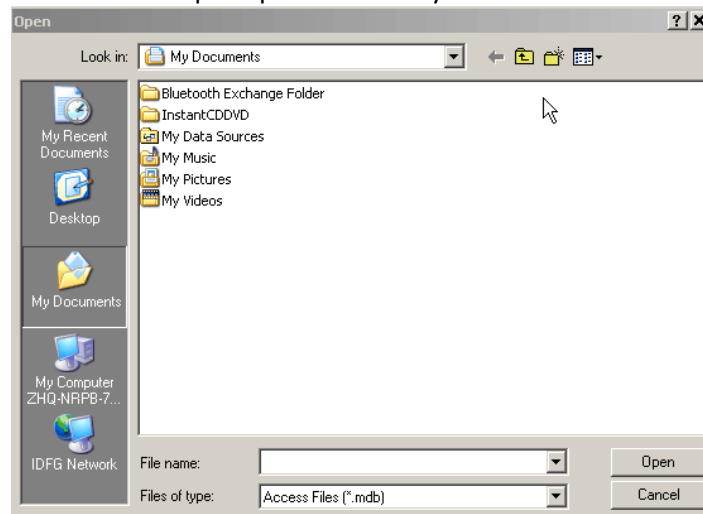
13. Merging data and building P3 files

Merging data

- There may be times when data is entered at a remote computer and the remote data must be moved to the primary computer where the local database is being compiled. In these instances, the MERGE command can be used to merge the remote data on a jump drive with the rest of the database on the primary computer's hard drive. The command will *append* and *update* all records based on Trap Date and Fish ID.
 - Click on DATA-MERGE. **(1)** A popup will give the user a warning to make sure that all data on the jump drive is new data. The program will overwrite records on the hard drive with records from the jump drive.



- By clicking YES, the user will be prompted to identify the *.mdb file from the jump drive to merge.



Building P3 files

- BUILD P3: PIT tag information may need to be relayed to the Columbia River Basin PIT Tag Information System (PTAGIS). The trapping program can be used to automatically generate the P3 interrogation file
 - Click on DATA-BUILD P3 FILES.

14. Archiving data

- At the end of a trapping year, the local database should be archived and the program should be prepared for the next year.
 - The local file (C:\HDMS\Trap.mdb) should be renamed and saved in a different folder as an archive copy (e.g., rename the 2008 data file to C:\Archive\Trap2008.mdb)
 - Start the HDMS trapping program. Opening the program will create a new C:\HDMS\Trap.mdb file. This will be the new file where all the current year's data will be written.

- The user will be asked if this computer will be used to upload. Selecting YES will show the UPLOAD menu item in the program. The user will be prompted to enter species/site/date and length criteria. The program is now ready for data entry for the current year.

Appendices

A1. Glossary

Adjusted Data – Historic data that has had Provisional records added to reconcile data with the Brood Year Report (see “Provisional” definition).

Age – Represents the age of the fish based on the length criteria used at the time of trapping (designated by the user in the trapping program). If no length is entered for the individual or group of fish or no length criteria is given, “Age” = -99 is shown in the data record because an age could not be determined.

Agency - Management agency for the hatchery.

Comments – Open text field for information that cannot be captured by other fields (up to 254 characters).

Count – Number of fish associated with the data record. “Count” = 1 for individual fish; “Count” > 1 for groups of fish. If “Provisional” is TRUE for the record (see “Provisional” definition), then “Count” can have either a negative or positive value. Date - Month/Day/Year for record

CWT - If TRUE in the data record, it indicates a fish or group of fish that were identified as having a Coded Wire Tag (CWT) inserted into the snout of the fish. These tags are used to identify a group of fish. If no CWT is present, the field will be blank.

Events – Anything that happens to a fish after being ponded. The events module is used to enter any ***changes in fish dispositions*** of ponded fish ***after ponding***: e.g., transferred, pond mort, spawned, released

Final Disposition - Description of what was done with killed fish (***dispositions of killed fish***: e.g., fertilizer; sustenance; landfill; unknown)

Hatchery – Name of hatchery with which trap is associated.

Initial Disposition – Description of what was done with the fish in the record immediately after recovery from the trap (***disposition of trapped fish prior to and including ponding***: e.g., released; ponded; trap mortality; transferred out, given away, or killed without first being ponded).

Inject – If TRUE, the fish was injected with antibiotics after trapping.

Injuries - Injuries observed on the fish associated with the record. If “Injuries” = NO INJURIES in the data record, then no injuries were observed.

Jack – If TRUE in the data record, it represents a 3-year old Male fish (1-Ocean Male) as determined by length. The designation uses the length criteria defined at the time of trapping or a Jack field specifically selected by the user at trapping (if specific lengths are not collected at trapping). Fish records that do not meet either of these criteria will be indicated as FALSE in the field.

Length – Length of fish measured in centimeters (cm).

Length Type – The type of length measurement taken on the fish, based on body parts (e.g., Fork Length, Total Length).

Marks –Indicates the type of mark that was observed on a fish at trapping (existing) or was given to a fish after retrieval from the trap (applied) for the purpose of identifying an individual or group (e.g., fin clips and punches). Adipose, Right Ventral, and Left Ventral clips are always existing marks. All other mark types can be designated as existing or applied. Fish records without marks are represented as “Marks” = Unmarked. When mark information was not recorded, then “Marks” = Unknown.

Mini Jack – If TRUE in the data record, it represents a fish that is thought to be a 2-year old Male that is smaller in size because it did not live in the ocean (stayed in the river/estuarine system) or was in the ocean only briefly. The designation uses the length criteria defined at the time of trapping or a MiniJack field specifically selected by the user at trapping (if specific lengths are not collected at trapping). Fish records that do not meet either of these criteria will be indicated as FALSE in the field.

Natural – A field in the data records that is automatically filled using values from other fish attributes. If TRUE, the record represents fish that are unmarked and without coded wire tags (“Marks” = Unmarked and “Tags” ≠ CODED WIRE TAG). If FALSE, the record represents fish that are marked (“Marks” ≠ Unmarked) or are unmarked and with coded wire tags (“Marks” = Unmarked and “Tags” = CODED WIRE TAG). Fin erosion also can be used as an indicator of a hatchery fish for Steelhead. If the primary species is set to Steelhead, the user has an option to select “Fin erosion” as an injury for each fish by checking a box on the main trapping interface. If “Injury” = EF (fin erosion box checked), then “Natural” = FALSE, even if a fish is unmarked (“Marks” = Unmarked) and does not have Coded Wire Tag (“Tags” ≠ CODED WIRE TAG).

PIT Tag – Passive Integrated Transponder Tag (PIT Tag) which uniquely identifies a fish. If a PIT Tag is present, the field for the data record will have the unique identification number. If no tag, the field will be blank. Note that the presence of a PIT Tag also will be indicated in the “Tags” field with “Tags” = PIT.

PIT Tag Code -Alphanumeric code uniquely identifying fish into which it is injected. These numbers are valid PTAGIS data.

Ponded - Fish that were trapped and then placed into a holding pond.

Prespawn Morts - Ponded fish that died prior to spawning or prior to release for natural spawning.

Provisional – This field in the data records is used primarily for historic data. If FALSE, the record represents fish data that were based directly on raw trapping data sheets from the hatchery. If TRUE, the record was added to the database in order to adjust subtotals of raw trapping data to match subtotals in the Brood Year Report. Provisional records are included to add or subtract fish counts for individuals or groups of fish by gender, marks, and/or initial disposition. These provisional records do not change the raw trapping data, they merely adjusts the subtotals of summed records to match the Brood Year Report (BYR). For example, provisional records are needed when the sex of fish were misidentified at trapping, but correctly identified at spawning. This would result in different gender subtotals (1) at trapping and (2) after spawning. The BYR gives the final gender total after spawning, so the raw trapping records entered into the database will have gender totals that are slightly off from those reported in the BYR. Provisional records would be added to get the gender subtotals in the database to match the BYR.

Raw Data: Data records that were based upon the original trapping data sheets from the hatchery. The data records will have “Provisional” = FALSE for all raw data.

Recapture – If FALSE in the data record, then it represents a new fish trapped. If TRUE, the record represents a fish that was trapped, released and recaptured at the same trap at least once.

Release site - Fish released upstream, downstream, to another waterbody, or recycled into the fishery. The data field gives the location where fish were released for records with an initial disposition of RELEASED. The field is blank for all other dispositions.

Samples – If “Samples” = NONE in the data record, no samples were collected from that fish. If “Samples” ≠ NONE, the sample type listed in this field was collected from the fish associated with the record.

Secondary Disposition - Description of what was done with ponded fish (***dispositions of ponded fish after ponding***: e.g., pond mortality; spawned and killed/reused/reponded; released; transferred out, given away, or killed following ponding).

Sex – Gender of fish associated with the record.

Species – Common name of species for the record.

Tags –Indicates the type of tags that were attached to or inserted into the fish for the purpose of identifying an individual or group (e.g., Jaw, floy, coded wire tags). Tags can be observed on a fish at trapping (existing) or given to a fish after retrieval from the trap (applied). Coded Wire Tags and PitTags are always existing tags. All other tag types can be designated as existing or applied. Fish records without tags are represented as “Tags” = NO TAG. When tag information was not recorded, then “Tags” = NT.

Total Trapped: Sum of fish that were collected from the trap during a trapping season. Summary table can show either with or without recaptures, depending on which option is enabled (see section [5. Viewing the data](#) for details on the summary page).

Trap –Facility where trapping and/or spawning occurs.

Trap Morts - Fish found dead in the trap.

Year – Trapping year for data record.

A2. Data Management and Flow Suggestions

Getting data from the trap to the hatchery

Option 1: Record data on hardcopy at the trap and enter data at the trap:

- Best option, as this will put all data directly into a local Access file, which will be uploaded to SQL server when connected to the internet. Data is entered by the person filling out the trapping sheets (and is most familiar with the data).
- A separate log of daily totals and the sender's initials should be kept and sent to the hatchery regularly (possibly weekly)
- Access file (Trap.mdb) will be the master copy of the raw data. Trapping sheets are backups.

Option 2: Record data on hardcopy at the trap; FAX to hatchery; One person enters all traps' data into Trapping module. An alternate data entry person should also be trained.

- Because there usually is not a regular schedule for FAXing data, a log of FAXes should be kept by both the trap operators sending the data and hatchery personnel receiving the data
- FAX logs should record the following: date the data was sent/received, person sending/receiving data, dates of trapping covered in data transmission, daily totals of fish trapped
- A copy of the FAX log recorded by the trap operators should be sent to the hatchery at least once per month. Hatchery personnel can then compare the trap operators' sent-log against the hatcheries received-log to look for any inconsistencies. This will ensure that all data that was sent by the trap operators was in fact received by the hatchery.
- Each FAX transmission should be collected in one file; this will be the master copy of the raw data. One could add some fields to a standard trapping sheet that capture FaxedYN, EnteredYN, UploadedYN, VerifiedYN. The fields could be checked off or filled with initials of the personnel.

Ensuring all data gets into local Access file

If using **Option 1** above:

- All data should be in Access file on the trap computer.
- Daily totals should be checked on a regular basis (daily, weekly?) against the trap sheets. This will allow hatchery personnel to immediately identify if there are missing or incorrect records in the Access file.

If using **Option 2** above:

- All data from the master hardcopy of the data should be entered into Access at the Hatchery.

- Daily totals should be checked on a regular basis (daily, weekly?) against the hardcopy data. This will allow hatchery personnel to immediately identify if there are missing or incorrect records in the Access file.

Ensuring data uploaded to the web matches the local Access file

For both Options, the data uploaded to the web will need to be checked regularly (daily, weekly?) throughout the trapping season to identify potential problems with the upload

- Daily totals on the web should be compared to (1) daily totals in the Access file, (2) daily totals from the logs, and (3) daily totals from the raw hardcopy (if using Option 2).
- If there are discrepancies, comparing the web data to all these sources should allow errors to be quickly identified in the data flow.

Back Ups and Archiving Data

Regardless of how the data is compiled, a back up copy of the Trap.mdb should be created daily or whenever changes are made to the database. It should be stored in a separate physical location. For example, the Trap.mdb can be copied to a thumb drive and stored at a hatchery employee's residence.

When done with the year's Trap.mdb, an Archive copy of the Trap.mdb files can be copied to a thumb drive or CD and renamed something like 2008McCall.mdb, or 2009Clearwater.mdb. They should also be stored at a separate physical location similar to the backup Trap.mdb file.

A3. Installation Instructions

If you are using Office 2003, you will have to use the procedure below to get a conversion file installed. If you are using Office 2007, you can just go directly to the “Install HDMS” section below.

Install all Office 2003 updates like below

For example, others who downloaded Microsoft Office Compatibility Pack for Word, Excel, and PowerPoint 2007 File Formats also downloaded:

Microsoft Office Compatibility Pack Service Pack 1 (SP1)

The 2007 Microsoft Office Suite Service Pack 2 (SP2)

Office 2003 Service Pack 3 (SP3)

Install 2007 to 2003 conversion file

<http://www.microsoft.com/downloads/details.aspx?FamilyId=941B3470-3AE9-4AEE-8F43-C6BB74CD1466&displaylang=en>

Install HDMS

<http://fishandgame.idaho.gov/is/ifwis/hdms/trapentry/publish.htm>

Security Issues

A person with Administrative privileges needs to install the files above. If the person installing the patches, converter, and application is NOT the same as the User of the application, then it must be installed so that all users or the designated users can use the software.

A4. Relevant Web Sites

Installation of Program

<http://fishandgame.idaho.gov/is/ifwis/hdms/trapentry/publish.htm>

Web access to trapping database

<http://fishandgame.idaho.gov/is/hdmsdownload/defaultpage.aspx>

Public Summary web site (Chinook)

<http://fishandgame.idaho.gov/ifwis/hdms/chinook/index.html>